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THE PRINCIPLES AND FINANCE
OF
FIRE INSURANCE

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THE PRINCIPLES AND FINANCE
OF
FIRE INSURANCE

BY
F. HARCOURT KITCHIN, B.A., A.I.A.

*Late Scholar of Selwyn College, Cambridge
Editor of "Bourne's Insurance Directory," etc.
Recognised Teacher of Insurance in the University of London*



EFFINGHAM WILSON

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PREFACE.

IN the autumn of 1903 I had the honour to deliver a course of ten lectures at the London School of Economics (University of London) on "The Principles, Practice and Finance of Fire Insurance". These lectures were well received, and caused a gratifying amount of interest, not only among those who listened to them, but also among insurance officials outside. I have, therefore, ventured to recast my Lectures in the form of this book, and present the result in the hope that it will be accepted as a serious study in the comparative science of insurance.

For many years past I have had opportunities of being in close touch with nearly every branch of insurance business, and it has become a matter of conviction that no one branch can be profitably studied by itself. The great branch of insurance on property known as Fire Insurance is closely akin in many respects to the other great branch of Marine Insurance. And in dealing with Fire Insurance here I

have endeavoured to treat it not as an isolated system but as one among many systems, and have illustrated its principles and practice where possible by comparison with Marine Insurance. I have also endeavoured to use the lessons of history and to show how an insurance system is a living organism with its roots in the past. By this use of the comparative and historical methods I have tried to throw light on some of the difficult problems of Fire Insurance, and have also tried to produce a book which will be of interest to many readers who have no connection with insurance business. This is not a difficult or technical work. It is written in plain English, and the writer believes that his twelve years' experience as a journalist has at least preserved him from being needlessly dull.

Both in the preparation of this work, and for many years past in the course of my daily occupations, I have received the fullest information and assistance from many leading insurance officials. Their assistance has been of the greatest possible service—in fact what there is of merit in this book is due almost wholly to them—and I trust that they will endure patiently my private opinions and criticisms. Such criticisms as I have offered

have been put forward in a sincere and friendly spirit. I have approached my subject as an observer and interpreter, and as one who has had many opportunities of inside information, and have in the treatment of it followed the lead of my individual judgment. No one is in any way responsible for the views expressed in this work except the writer of it.

The literature of Fire Insurance is somewhat scanty, and there does not exist in this country a treatise which can compare with the excellent American book on *Fire Insurance and How to Build*, by Mr. F. C. Moore. This volume has been of much service to me, and I have also consulted with profit the historical work on *Fire Insurance Companies*, by Mr. F. B. Relton. A large amount of valuable and practical information is contained in the papers read before the Insurance Institutes of Great Britain and Ireland, and published by the Federated Institutes. Some other books, such as Mr. Lynch's *Redress by Arbitration*, are also of much interest to the insurance student. As this book is written primarily as an elementary treatise for the use of students of insurance and of officials in fire offices, it may be useful if I append a list of those books and papers which have been of most assistance to the

writer, and which will give much information on the various points dealt with.

Fire Insurance and How to Build, by Mr. F. C. Moore (New York).

Fire Insurance Companies, by Mr. F. B. Relton.

Redress by Arbitration, by Mr. Lynch.

Marine Insurance, by Mr. Frederick Templeman.

Cost Price of Fire Insurance, by Mr. James Ostler.

Fire Hazard of more Important Chemical Products, by Dr. E. H. Cook.

Fire Insurance, by Mr. John M. M'Candlish.

Observations on the Progress and Prospects of Fire Insurance as a Science, by Mr. David L. Laidlaw.

The Aspect of Electricity from an Insurance Point of View, by Mr. B. Chatterton.

History and Practice of Marine Insurance, by Mr. Douglas Owen.

Notes on the Usual Provision for Unexpired Risks, by Mr. David Deuchar.

The Necessity for a Tariff Organisation in connection with Fire Insurance Business, by Mr. David Deuchar.

The Average Conditions of a Fire Insurance Policy, by Mr. Samuel Pipkin.

The Practice of Fire Insurance in the United States of America, by Mr. J. N. Lane.

Fire Insurance: Practical Notes on Leading Cases, by Mr. Alexander Watt.

The Contract of Fire Insurance, by Mr. Charles Stewart.

F. HARCOURT KITCHIN.

LONDON, March, 1904.

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CHAPTER I.

THE FIRE INSURANCE CONTRACT.

THE science of fire insurance is a purely experimental one. The main principles have been determined by the experience of rather more than two centuries and are for all practical purposes fixed. The practice on the other hand varies very much and must continue to vary. The conditions under which insurances are granted, and the rates of premium which are charged, must be determined by the circumstances existing at a particular date, and no special permanence or weight attaches to the decisions of any generation of fire underwriters. That is one of the principal reasons why an open mind and an observant imagination are so necessary. Fire managers must be ready and prepared to take the world as they find it, and, if possible, to anticipate the needs and requirements of the public. The principles of sound finance are permanent and cannot be transgressed with impunity. We have then to deal with two fixed quantities—the principles of insurance and the principles of finance—and with one highly variable quantity, namely, the practice of fire insurance and the means whereby fixed principles are suited to the necessities of chang-

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ing conditions. The variable and purely experimental character of much of fire insurance indicates how important it is that the past should be studied as well as the present if we want to discover the reasons which underlie both principles and practice. It is also highly desirable to remember that fire insurance is only one among many branches of insurance business. Viewed by itself much is perplexing, but when we compare it or contrast it with marine insurance—which most nearly approaches it—we can without much difficulty trace both principles and practice home to their causes. I say marine insurance because life and accident business do not deal with commodities which can be valued. Human life and human health cannot be assessed as we can assess the value of a house or a ship or the contents of a warehouse. Human beings are therefore allowed, within limits, to put their own valuations upon their lives and upon the disadvantages they would labour under should an accident disable them. Life and accident policies are in no sense contracts of indemnity. They are contracts for definite fixed amounts payable in certain eventualities and provided that the eventualities can be proved the amounts become payable automatically. On the other hand fire and marine contracts are in their essence contracts of indemnity and in both classes of insurance it is necessary to determine what loss has been suffered by the insured and to what measure of indemnity he is entitled. With all respect to the able practitioners of life and accident insurance I

must express my conviction, based on some acquaintance with the different classes of business, that fire and marine insurance are infinitely more difficult and demand much higher qualities in underwriters if they are to be practised successfully. From the point of view also of a student—and in these matters I, by the nature of my profession, am perpetually an observer and student—these classes of insurance are immeasurably the more interesting both on account of their difficulty and the manner in which the circumstances under which they are carried on constantly vary. Although my main purpose is to deal with fire insurance I shall from time to time illustrate what I have to say by a reference to the kindred business of marine insurance.

A PERSONAL CONTRACT OF INDEMNITY.

The first principle of fire insurance is this: that the insurance contract is one of *indemnity for actual loss, and that it is a personal contract between the company granting it and the person to whom it is granted.* The person insured need not be the owner of the object specified for insurance, but he must have a direct financial interest. The insurance does not cover a building or goods as such but is an indemnity to the person interested in the building or goods. That is to say, if an owner or mortgagee of a house parts with his interest the insurance does not automatically pass to the new owner or mortgagee although in practice a transfer of the policy is commonly arranged. The

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sum assured under a fire policy with an insurance company merely marks the limit beyond which the liability of a company does not go in indemnifying the insured ; it is no measure of the actual value. It is also a fundamental principle of the fire insurance contract, as far as the insurance companies are concerned, that the indemnity is for actual material loss caused by a particular fire and does not extend to loss of profits or damage to trade which may be the effect of the occurrence of the fire. In the case of buildings, loss of rent may be provided for by a specific insurance for that purpose. Loss by fire nowadays includes loss by lightning, whether a fire occurs or not, and also usually includes damage from explosion of coal-gas in buildings other than those forming part of a gasworks. It will be seen that a fire insurance contract is strictly limited and that it is designed to prevent any one from making a profit out of a fire. In this respect there is a great and important difference between a fire and a marine insurance contract. A marine insurance policy, though primarily one of indemnity, goes in practice much further and in most cases admits the value of the objects insured. Thus if a vessel insured for £50,000 is totally lost the sum payable under the policy is £50,000 at least. It may be more since the underwriters have to bear the cost of any attempts they may have made at salvage. In the same way the value of consignments of cargo are admitted in a policy. The effect of this difference is that while one cannot or is not supposed to make a profit out of a loss by fire on land, it is no uncommon

thing to make a profit out of a loss from any cause by sea. It is in fact part of the ordinary marine business to insure the profits which are expected to be made out of a voyage and also to secure indemnity against the indirect losses which may be incurred through the wreck of a ship. These total loss policies for "disbursements," "profits" or "freight" are not always legal documents since they often transgress the law which requires that an insurance can only be effected to the extent of an actual interest, but they are, of course, never disputed on this account by the underwriters or companies which grant them.

If a ship which is insured for a year or for a voyage under a "valued policy"—that is, a policy in which the value of the subject of insurance is admitted as correct—suffers from a casualty of a partial and not a total nature—and these partial losses are, of course, in the great majority—then the marine contract is one simply of indemnity. The underwriters bear the cost of salving and repairing the vessel. They in fact "reinstate" the vessel as nearly as possible, a proceeding which is a familiar one in the case of fire insurance. But where partial losses occur in cargo it is usual to pay the full admitted value of that part of the cargo which is damaged and the underwriters recover what they can by way of salvage.

I give this illustration from the practice of marine insurance because members of Lloyd's sometimes issue fire insurance policies on the system to which they have been accustomed in connection with marine business, and it has been urged that the ordinary fire

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insurance policy does not fully meet the requirements of the public, through being so strictly one of indemnity and indemnity only.

LLOYD'S FIRE POLICIES.

And here it will probably be of interest if I explain the practice of the leading underwriters at Lloyd's, who turn their attention to fire insurance business. The great majority of their policies are part of insurances in which the fire offices are already interested. The Lloyd's underwriters merely take a surplus line, or a reinsurance, and they follow the rates of premium, the conditions and the settlements of the insurance companies with which they are temporarily associated. In this there is nothing which calls for attention. But there are transacted at Lloyd's two other classes of fire insurance. In special cases where underwriters know the insured, or the insurance brokers through whom the business is placed know the insured, valued policies are issued both on buildings and on goods. A value is agreed at the outset and if a total loss occurs the whole sum insured is paid. This is a special class of business and is not transacted unless the position, property and circumstances of the insured are known. It is not done over the counter for Tom, Dick and Harry, as the fire offices are obliged to do their business. In the case of goods under "valued policies" an inventory is agreed and any changes in that inventory, whether by way of additions or of withdrawals, have

to be notified if the insured is to receive full protection. The advantages of the system even on the restricted lines upon which it is in force at Lloyd's seem very doubtful. It is clearly not suited to a private householder, assuming that members of Lloyd's would accept his business, since he would, strictly speaking, have to notify every change in his household goods if he wished always to be covered ; this would be a perfect nuisance, much worse than the preservation of bills and vouchers for furniture purchased which it is desirable to do when an ordinary indemnity policy has been taken out. But there is another class of special fire insurances at Lloyd's which, it seems to me, really does meet the requirements of the public. This is the insurance of loss of profits due to a fire. The contract of a fire insurance company takes no cognisance of loss of profits or trade —although loss of rent may be provided for—and yet a loss of profits may be a much more serious matter than the value of the property destroyed. Take, for instance, the case of a theatre or a show like Madame Tussaud's. A fire might easily destroy the whole run of a piece or a season of business, and cause the loss of large sums spent in preparation. Numerous instances of such prospective losses will readily occur to the reader. Now members of Lloyd's do *in approved cases* issue policies to meet this contingency of loss of profits or trade. Like the "disbursement" policies of the marine companies and underwriters they are not always strictly legal, but they are never disputed on that account. Provided that due care is

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used in accepting risks of the kind, and that the occurrence of a fire is not made too desirable a contingency from the insured's point of view, there does seem a good deal to be said for an occasional extension of the measure of indemnity for loss from fire granted by insurance companies. It seems strange sometimes to an observer like myself that in the case of a company which does several branches of insurance business—fire, marine, life, etc.—the marine underwriter should freely accept the insurance of the "loss of profits" of a shipowner or merchant through a casualty at sea, while the fire manager of the very same company in an adjacent room would shrink in horror from doing a similar thing in regard to a casualty on land. But even after admitting the possible propriety of now and then making in approved cases a concession to public needs, there can be little doubt that fire insurance companies by their adherence to strict legality have escaped many evils. At the same time both as regards the principles of their business, and the manner in which those principles are interpreted in practice, fire managers should remember that accusations of narrow-mindedness may sometimes be deserved. May I be permitted to say that most fire insurance men who are attached to the companies are apt to rate Lloyd's too cheaply. In spite of the absence of direct evidence of security, and in spite of occasional failures and scandals—of which we had a bad example during the summer of 1903—the system of private underwriting at Lloyd's, the oldest and most elementary system of insurance

in the world, now stands more strongly than ever in the support of the public. I have it on exceedingly good authority that the net premium income of members of Lloyd's exceeds £7,000,000 per annum, and that the fire premium income is little short of £1,000,000. A system which, with such manifest disadvantages, can live and grow as the system at Lloyd's does grow is worth studying. When we compare fire and marine insurance methods we certainly find that the loose manner in which marine insurances are granted and values are admitted has led in the past to serious evils, and who can say that those evils are even now non-existent? It has also led to much special legislation, to load-lines and surveys by the Board of Trade in order to protect seamen's lives from the wrong-doing of unscrupulous shipowners. It should be a source of just pride that the practice of fire insurance has in this country revealed no such abuses and that the public have not demanded, and have shown no signs of demanding, the protection of special legislation.

There are, moreover, sound practical reasons for the nature, as a pure indemnity, of the fire insurance contract, which make "valued policies" as a general rule quite out of the question; and this is freely admitted by Lloyd's underwriters. A ship is built under the supervision of surveyors employed by Lloyd's Register or by the corresponding foreign organisations. It is classified after survey and all alterations in hull or machinery or the effects of any repairs are noted by the surveyors and entered in the

official registers of which copies are available for the use of underwriters. The cost of this expensive survey is part of the cost of building or repairing a ship. The underwriter can see at once from the register what is the age, class and build of a vessel, and he can estimate its value with sufficient accuracy for all practical purposes. The cost of all this forms no part of his business expenses. But buildings on land are in totally different case. It would be necessary if values were agreed upon between the insured and the fire offices for a survey to be made and for the cost of this to be borne by the insured, that is to say, the cost must ultimately fall upon the insured whether the insurance company nominally pays it or not. It would also be necessary to make a new survey whenever a policy was renewed. It will be seen that the cost of all this, falling directly or indirectly on the insured, would enormously increase the cost of fire insurance, would in fact tend to make that cost prohibitive. So also in the case of goods. Cargo consigned by a ship is sent under a bill of lading and the value can be definitely stated by the owner. He has in fact to declare the value to the officials of the Board of Trade. The goods are consigned to a definite person and insured while in transit. They cannot be removed without immediate evidence of removal being forthcoming. In the case of goods on shore the values would have to be determined after a taking of stock, and be agreed upon by the two parties to the contract. Their value would fluctuate constantly according to the move-

ments of the market. They could be removed at any time and insurance companies would be far more exposed to the chances of fraud than they are at present. And after all, even supposing that the public were willing to pay the cost of "valued" policies instead of policies of indemnity, what real benefit would they get? If the agreed value were less than that at present determined by assessors after a loss the insured would be worse off than he is now; if it were greater the risk of fraud and incendiarism would be enormously increased. And the cost of covering these increased risks would not be borne by the insurance companies. *Insurance companies do not bear the losses of fires or the expenses of conducting their business.* They merely supply the machinery by which the public at large is enabled to meet the losses which fall on the community through fire and the expenses of maintaining that machinery. They are agents for the public, skilled agents who derive a profit, sometimes small, sometimes great—on the average a very moderate profit—for carrying out a necessary public service.

THE NECESSITY FOR GOOD FAITH AND INTEREST.

The character of the fire insurance policy is one of indemnity only and its personal nature—insurance not on buildings and goods as such but a personal indemnification against loss from fire—carries with it certain necessary consequences. In the first place it implies the fullest good faith between the contracting

parties. Not only is it necessary that a full disclosure should be made of all material facts before a policy is taken out, but that after a policy has been effected no change should be made which will have the effect of altering the nature of a risk. For instance, if a man has taken out a policy on a building as a private dwelling-house he would not be entitled to use it as a storehouse for petroleum. The insured is usually plainly told on the face or back of a fire policy that he must not do anything to alter the nature of the risk. The main principle of the fire insurance contract was determined at quite an early period in its history, and it was clearly laid down both that a fire insurance policy was one of personal indemnity and that it could only be effected to the extent of the interest of the person insured. In 1743 we find Lord Chancellor Hardwicke declaring the law in such plain and forcible terms that I cannot do better than quote them. The Lord Chancellor said that he was of opinion from the nature of all insurances that the insurance must cease with the interest of the insured. An insurance implies an interest in the thing insured. If it were otherwise many ill consequences might follow: men might insure the houses of strangers and, in hopes of getting the money insured, set their houses on fire. The policies were not insurances of the things themselves mentioned to be insured, for nobody can warrant against accidents, nor did such insurances attach on the thing or in any manner go with it, as incident thereto, by any conveyance or assignment of the thing insured; but

the insurances were only special agreements with the persons insuring against such loss and damage as they should sustain; and the party insuring must have a property at the time of the loss, or he could sustain no loss and consequently be entitled to no satisfaction.

That judgment of a century and a half ago stands for all practical purposes to-day and describes accurately the nature of the fire insurance contract. Lord Chancellor Hardwicke laid down these principles as applicable to *all* insurances but, as I have already shown, the practice of marine insurance has departed a long way from the principles there declared to be those of all insurance. Fire insurance, however, continues to be conducted in strict conformity with the sound maxims of law, and it seems to me that the stern rejection of all gambling elements in fire insurance and the unchanging character of its main principles form the fullest justification for its existence and the best guarantee of its permanence. *Fire insurance to-day differs in no essential feature from the fire insurance of a century and a half ago* and we may, I think, look forward with confidence to an indefinite continuance of the business on the sound and just lines which have distinguished its conduct in the past. It will, I hope, clearly be understood that in any references to insurances against loss of profits or trade I referred only to genuine and calculable losses such as would be accepted as reasonable by ordinary business men.

THE BEGINNINGS OF FIRE INSURANCE.

Now that I have, I hope, made clear what the fire insurance contract is as far as the companies are concerned—that is nineteen-twentieths at least of the business done—we may take a glance backward and see under what circumstances the business of fire insurance began in this country and the manner in which its essential features came into existence. The city of London formed the congenial soil in which the germ of fire insurance was first planted, and it was the Great Fire of 1666 which first brought home to men's minds the need for some indemnity for the damage done by fire. Marine insurance had been transacted in an informal fashion by private underwriters for hundreds of years before this date, but there is no evidence worthy of the name that private underwriters had turned their attention to fire insurance in this country. If that had been the case there would surely have been some mention of the existence of this means of protection by writers who have given accounts of the immense losses incurred in the Great Fire. The father of fire insurance in the city of London was one Dr. Nicholas Barbon, a son of the Praise-God Barebones of Cromwell's Parliament. This Barbon or Barebones received as baptismal name a long text ending with the word "damned," and as life was too short for the use of his whole name he was known familiarly as "Damned Barebones". To this man, a builder and speculator and one with the precious faculty of imagination,

we owe the first definite successful attempt to establish a fire insurance company. At first his operations and those of his friends were of the nature of private underwriting, but in 1680 was founded "the Fire Office" known as the "Insurance Office at the backside of the Royal Exchange". This was the first joint-stock or proprietary company for fire insurance in London and probably in the world. A remarkable feature about this first office was that it started on the mercantile principle of a fixed payment in the event of a loss in return for a fixed annual premium. The reader will please observe that the original fire insurance contract was a "valued policy" as well as one of indemnity. The premiums were charged, not on the basis of capital value but on that of annual rent and the insurance applied only to *buildings*. Insurances on goods came later. It was provided that a house should be insured for £100 for every £10 per annum rent and that the office should rebuild or pay the party whose house was insured the sum of £100 for each £10 of rent as *often as the house was burnt down according to the election made at the time of insuring*. Policy holders had therefore the option of taking out a "valued" policy or of having their property rebuilt or reinstated. In the following year, 1681, the company altered the provision as regards rebuilding and laid down that if a house insured be burnt the loss must be satisfied in money; for "the office is not to rebuild though both were at first proposed (to be at the option of the insured)". The change was made in order, it was thought, to

avoid disputes about the dimensions, form and substantialness of building. I am using the wording of the company's documents. The contract, when this change was made, became a valued policy only. The insurances at first ran for long terms, from seven to thirty-one years—probably on the false analogy of leases—but by 1700 these terms had been reduced to from one to seven years and discounts were allowed on the premiums for long-term policies. I shall deal in some detail with the history of fire insurance while considering various branches of the subject, but for the moment we are merely trying to trace the evolution of the fire insurance contract. The Friendly Society, an office for mutual fire insurance, stated in 1683 in its "proposals" or, as we should now call them, its "conditions," that "if any house be demolished by or by reason of a fire (which it is accounted to be when the floors from the first floor upward and the roof are burnt and fallen in) *the whole sum insured* is paid in sixty days after, or sooner if found requisite; but if a house is only demnified (that is, damaged) the office do immediately repair and put in as good condition as the same was when insured". Here we have a valued policy without any provision for reinstatement in the event of total loss. So long, indeed, as the insurance was based upon annual rent there was something to be said for valued policies since the rent was in itself a measure of value. But when this system was abandoned and goods as well as buildings were insured the policy quickly became one of indemnity only for

actual loss sustained. The Sun Fire Office founded in 1710 was the first insurance company to cover goods as well as buildings. The Hand-in-Hand—which without offending any susceptibilities one may declare to be the oldest fire office now in existence—was founded in 1696 for the mutual insurance of buildings and worked in harmony with the Union Fire Office, founded in 1714 for insuring goods and not buildings. The operations of the Hand-in-Hand and of the Union supplemented one another, and the two offices worked together until 1805. In that year the Union took up the insurance of buildings and the Hand-in-Hand that of goods.

THE FIRE POLICY BECOMES ONE OF INDEMNITY.

The Sun Fire Office may fairly claim to be the first office to insure both goods and buildings, and it is a remarkable fact that it started off with most of the principles and much of the practice which to-day commend themselves to experience. The policies of the Sun Fire Office were from the first contracts of indemnity. In the proposals of 1710 we find that on payment of the stipulated premium the insured was “entitled to the benefit of *having his or her loss and damage by fire*, whether in his or her house or movable goods, merchandise, wares, furniture, etc., under one roof, *repaired and made good to him or her*”. Here we have a pure contract of indemnity: the loss or damage from fire was to be repaired and made good and, what is more, the actual loss or damage had to be proved. Article 11 of the original

proposals states that "every sufferer must make out his or her loss and damage upon oath before a judge or master in Chancery, and carry that affidavit to the minister or churchwardens of the parish in which the fire broke out, and some other eminent housekeepers in the said parish, especially such as live near the place where the fire began but have themselves sustained no damage thereby, and are best acquainted with the person, reputation and circumstances of the said sufferer, who shall sign a certificate that they do know, or believe nothing to the contrary, but that the sufferer *has really and by misfortune lost by fire* the sum mentioned in his or her affidavit, upon producing which to the company he or she shall receive his or her claim. But if there appears any fraud or perjury in such sufferer he or she shall be excluded from any right or interest in these proposals." Whatever we may think of the cumbersome method of proving a loss with its dragging in of the minister, churchwardens and eminent housekeepers (which means of course householders, not elderly ladies engaged in domestic occupations), one point stands out clearly and this is that the company contracted to pay for damage *really and by misfortune lost by fire* just as is done to-day,

THE FIRE POLICY A PERSONAL CONTRACT.

The personal nature of the fire insurance contract was also insisted upon at an early stage in its development. You will have observed from the wording of the Sun's proposals of 1710 that the indemnity was

a personal one. The person insured was entitled to the *benefit of having his or her loss or damage by fire repaired and made good to him or her*. The insurance was not on the buildings or goods themselves but a personal indemnity to the owner, to him or to her. Moreover it is stated, “if any *person insured* removes his or her habitation he or she must give notice and have his or her policy changed at the office”. Note the words “*person insured*”. It was the person who was insured, not the goods. I venture to insist upon the personal nature of the fire insurance contract even at the risk of being tedious—since it is fundamental and the ignorance of this first principle of fire insurance on the part of the public causes much of the misunderstanding which sometimes arises. A marine insurance contract, though also to some extent personal, is not mainly so. The insurance there is upon a ship or upon a cargo and follows the ship over the world and clings to the cargo whatever may be the hands through which it passes up to the ultimate destination and termination of the insurance. The two contracts differ in their essence and the difference is due to the altogether different circumstances to which the contracts relate. Property on land and property at sea are essentially different: I have already indicated the main reasons why this should be.

THE LIABILITY OF FIRE INSURANCE COMPANIES.

When once a firm grip is secured upon the principles of fire insurance the rest follows easily and naturally.

As a fire insurance contract—except in the special cases at Lloyd's already described—is a policy of indemnity *the liability of a company is fixed by the market value of the material destroyed at the time of a fire.* The insured not being entitled to make anything out of a fire the moral hazard of the insurance company is reduced by the inconvenience caused by genuine losses by fire. In estimating the value of the property destroyed no heed is taken, in theory, of the actual cost of that property, though in assessing a loss in practice some regard has to be paid to cost. In the case of buildings the state of repair and the condition at the time of the loss must be taken into consideration and allowance duly made for ordinary depreciation. This, I may remark, is not done in Lloyd's valued policies. A fire insurance company is not liable to replace a hovel by a palace. Where reinstatement involves expenses which were not incident to the original buildings—suppose, for example, the new house to replace the one burnt has to be set back further from the road in order to comply with the building regulations of the district, or if it is a class of building which may not be replaced at all—then the insurance company is not liable for the additional costs of the change. A fire may have brought many liabilities upon the owner of a building for which it is not the duty of the insurance company to compensate him. In cases such as this the sweet simplicity of a valued policy no doubt appeals to the average man. He would sooner have a fixed sum of money thrown to him to do with as he pleased rather than have to

prove his actual loss. But it is not in the public interest to make the occurrence of fires agreeable to those who incur them. In practice, however, the convenience of the insured is considered as far as possible and a company which unreasonably insisted upon an inconvenient reinstatement would be justly condemned and would suffer in business.

At a very early stage in the history of fire insurance the companies claimed the right of reinstatement of *buildings*, and this right was confirmed by the Act of 4 Geo. III., cap. 14, in 1763 and afterwards enlarged by 14 Geo. III., cap. 78, and 28 & 29 Vict., cap. 90. These Acts gave an insurance company power, if it so pleased, or upon the request of any person or persons interested in a building, to expend the insurance money as far as it would go in rebuilding, reinstating or repairing. In electing to reinstate a building a fire office is entitled to make use of standing materials, but it becomes responsible for the mistakes or bad workmanship of the architect or builders whom it employs. It is within the limits of the sum insured liable to replace a destroyed building by one which is equally good; it would not be entitled to put up a new building on an old foundation or on old walls if the new work caused the old structure to display signs of weakness. If also the insured wanted to replace his burnt house by one upon a more desirable site the company would be liable only for the money which would have been sufficient to rebuild the old house on the old site. All this follows logically from the idea of a personal indemnity for actual loss and I need not

elaborate the point. As regards goods, a marine insurance company pays the admitted value and makes what it can out of salvage, but a fire insurance company takes salvage into account in arriving at the loss sustained. It does not pay any admitted value and the value has to be determined "according to the prices which articles burnt shall bear in the market on the day of the fire, so far as the sum assured shall extend; and in the case of old machinery or old household goods the office is liable to pay the actual value only on the day of the fire without any regard to what such property may have cost when new". That is a main principle of fire insurance so far as it is a contract of indemnity, and it has the support of the common law of the country.

CHAPTER II.

THE DISTRIBUTION OF LOSS.

IN my previous chapter I endeavoured to explain the essential nature of the fire insurance contract and the manner in which it differs from other contracts of insurance. We shall in the course of this book discuss the contract in detail as it is used in modern business and the conditions under which it is granted. For the moment we have to turn our attention to the main purpose of fire insurance, that of the distribution of loss over the whole community and among the various companies and other agencies by whose means insurance is carried on.

The essential aim and object of all insurance is the distribution of loss over as wide an area as possible, and, what is more, the equitable distribution of loss so that owners of property may pay as nearly as can be ascertained the precise amount which in their case is necessary in order to provide for insurance protection. In the early days of fire insurance the companies regarded it as their duty to prevent fires as well as to provide compensation for losses, and this duty they undertook because there were at the time no other agencies which were de-

signed to cope with the fire danger in cities. For this reason we find the primitive companies such as the Union and the Sun supporting private fire brigades and advertising the advantages of the facilities for extinction which they offered. But as the municipal spirit grew in strength it was seen that the duty of fire extinction was one for the whole community and not merely for that part which was sufficiently prudent to insure. Hence we find that at present the fire brigades are in the hands of municipal authorities—though in one or two cases, notably in London, the fire insurance companies contribute towards their cost. The salvage of property in burning buildings is still regarded as a function which may be discharged directly by insurance companies and in London, Liverpool and Glasgow the associated tariff companies maintain salvage corps, who do much valuable direct work in minimising the losses due to fire and much more indirect work in the systematic inspection of warehouses and the classification of the different classes of risks. But although fire insurance companies do, as a matter of fact, both through their salvage corps and through the manner in which the tariff rates are drawn up, powerfully contribute to the prevention of fires this is not an essential part of their operations. Their main purpose is to distribute such losses as must inevitably occur over the community in an equitable manner.

MUNICIPAL FIRE INSURANCE.

It is desirable to keep an open mind on matters of business and to realise that fire insurance does not necessarily require any insurance companies for its conduct. There is no reason, in theory, why the State or municipalities should not themselves supply the machinery by which fire losses are spread over the community, and there is, as the reader may be aware, a movement on foot to extend in this direction the duties of municipalities both in Great Britain and in America. There is also no reason why groups of property owners should not combine in order mutually to protect one another, and there are some instances in which these mutual companies or clubs do afford protection and conduct their operations successfully. They are more numerous and powerful in marine than in fire insurance. But mutual associations of owners, however successful they may be in certain industries, do not meet the general wants of the community and form brilliant exceptions to the general rule that fire insurance can only be conducted satisfactorily and cheaply by competing joint-stock companies which can command the best skilled assistance which is available, and can devote their whole attention to the one object of carrying on fire insurance profitably. Men work best where their personal financial interests are involved; gratuitous labour is generally inefficient.

Some of my readers may not be aware that when fire insurance first began in this country it was for a

time quite on the cards that municipal corporations would take over this branch of activity. As soon as Dr. Nicholas Barbon's Fire Office—the first joint-stock fire insurance company in London—had started its operations it met with fierce opposition from the Corporation of London. The Corporation in 1681—Barbon's Office was founded in 1680—drew up a scheme which was clearly modelled on that of Barbon and actually received 1670 proposals for fire insurance on buildings within the city. The Fire Office retorted by going one better in the matter of insurance premiums and announced its determination to go on cutting rates indefinitely: "They do further declare, that they will always set their price under the City". The Corporation's scheme was in force for two years only and was then abandoned principally because it was more than doubtful whether they had legal powers to do the business. In 1682 the City Chamberlain was instructed to repay the premiums which had been deposited on the contracts—which were made for terms varying from one to a hundred years—and to cancel the policies. But policies were in fact issued until the spring of 1683 and only ceased altogether when an application was made to the King's Bench for a *Mandamus*. This episode, trifling as it may now appear after 200 years, was really most important since the failure of the city of London in its enterprise determined the question whether fire insurance should develop on the competitive lines which we know and as an ordinary business or should merely be one of the forms of municipal enterprise.

And I must say that this was an uncommonly fortunate thing both for insurance companies and for the community at large. No municipality, even that of London nowadays, is large enough to provide an area for the full working of the laws of average and a single serious conflagration might at any time run away with the accumulations of many years. It might even happen in the case of a very heavy loss that the municipality would not be able to meet the claims out of its specific fire funds and then the remedy of the insured would be difficult to enforce. Under the latest modern schemes of municipal insurance the public bodies aim only at providing a fund to meet the losses from fire *in their own buildings*, and if several municipalities are grouped together for this purpose it may happen that they will conduct the operation with success, though in the long run it may be doubted whether they will really do any better for themselves than the insurance companies could do for them.

It is of interest to observe that the Corporation of London now (in 1903) takes a very sound view of its limitations as a possible means of affording fire insurance protection to its citizens. The Corporation was approached a year or two ago by dissatisfied owners and occupiers of warehouses in Cripplegate—where the heavy losses from fire have caused the insurance companies to frame a special tariff—and asked to undertake the insurance of buildings in the City. The answer of the Corporation—through the City Lands Committee—is most instructive and I

venture to reproduce the following summary from *The Times* of 18th December, 1903 :—

The Corporation of London have recently been considering an influential petition from citizens, especially those connected with Cripplegate Wards, asking them to take such action as they may deem expedient to relieve them from the excessive charges now demanded by fire insurance companies, and in effect to start a system of municipal insurance of all buildings within the City area. An exhaustive report has been presented by the City Lands Committee on the subject. They stated that, as the results of the disastrous fires which have occurred recently in Cripplegate Wards, the fire insurance companies have fixed a special tariff for insuring properties in that district, which is largely occupied by what are called Manchester warehousemen. The block system of rating was applied to the congested area of Cripplegate in 1897, and had remained in force ever since, causing depreciation in the value of property in the wards and inflicting a heavy burden on traders. It had been urged that the chances of fire in that district had been greatly reduced by the rebuilding which had taken place since the Cripplegate fires, but though the new buildings were individually less inflammable than the old, it must be admitted that the opportunities of widening streets were not fully taken advantage of. It was, indeed, questionable if the risk of conflagration had been sensibly diminished, seeing that that risk mainly depended on the width of streets and the opportunity afforded by open spaces, etc., of coping with and surrounding a fire. Despite the heavy block rates which had been enforced, the fire insurance of property in Cripplegate was not sought after by the companies, who had consistently treated all offers of such business with the greatest caution, accepting as little as possible. That was hardly to be wondered at, seeing that in the last twenty-five years claims for upwards of £4,000,000 had been paid in that district alone, and the committee could quite believe that the companies would infinitely prefer dealing with better risks at proportionately lower rates.

The committee in the course of their investigation considered several points as of primary importance. Parliamentary powers would need to be obtained before a compulsory insurance premium rate could be legally levied in the City. Such a Bill, even if ex-

pedient, would meet with considerable opposition from the insurance world generally, and might be anything but acceptable to owners of property situated in those parts where block insurance did not obtain. The security for the insured under such a scheme seemed hardly tangible enough, for even with comparative immunity from fire loss it would take some time to build up a substantial reserve fund. On the other hand, should extensive losses sweep away the reserve and cause a deficit, a special rate would have to be fixed and forthwith levied on all the policy holders. Thus the settlement of large claims might be retarded and dissatisfaction engendered. Most insurers, including trustees of public and private estates, would prefer the security represented by the accumulated reserve funds of the various insurance companies, which amount to about 40 millions. Among the premises to be insured would necessarily be the Guildhall, the Mansion-house, and other City property belonging to the Corporation. These formed a considerable portion of the security for the bondholders of the Corporation, and it did not appear to the committee that it would be right to subject them to a risk so inadequately secured. The scheme of the memorialists provided only for the insurance of all buildings within the City. The citizens would, therefore, be compelled to insure elsewhere the valuable goods deposited therein. It would be admitted that buildings, although they represented a sounder and more insurable risk, were relatively of smaller value than their contents. If the scheme were adopted it might enhance the cost of insuring goods, as the companies, being offered these only, might demand terms more onerous than those which they now obtained. The insurance companies voluntarily contribute over £35,000 a year to the expenses of the Metropolitan Fire Brigade, but it was conceivable that the establishment of municipal insurance might cause a reduction or even a total discontinuance of that contribution—a state of affairs which would necessitate increased rating.

Taking a broad view of the position, the City Lands Committee thought that the insurance against fire of buildings in the City could hardly, even at existing rates, be remunerative to any insurance office which dealt exclusively with that class of insurance. The wider the field in which a fire insurance company operated the greater the scope for the working of the laws of average, and it followed that no insurance scheme confined to a class of business

where the risk was abnormal could be truly economical or satisfactory to the insured. The proposed municipal insurance scheme was to be applicable only to buildings within the City. It could not, therefore, participate in really remunerative fire insurance business such as was represented by residential and suburban property, and for that reason alone it was doubtful if the ordinary insurer would not get better value, not to mention more satisfactory security, by placing his insurance with an existing insurance company whose business was unrestricted in its operations. The provision of new and properly equipped fire stations in the City might lead to a reduction in the near future of the heavy insurance rates which had given rise to the petition of the traders of Cripplegate. The committee could not see their way to support the scheme or recommend its adoption. It was not practicable or would not be conducive to the best interests of the community. Without even considering the general question of the expediency of the City's embarking in municipal trading, the committee were unanimously of opinion that it would be unwise for the Corporation to undertake the great responsibility which would be involved by the adoption of a scheme of municipal fire insurance for all buildings within the City.

JOINT-STOCK COMPANIES AND MUTUAL ASSOCIATIONS.

The result of the battle at the end of the seventeenth century between the City Corporation and Barbon's Fire Office settled the future development of fire insurance, but for a long time it hung in doubt whether the joint-stock principle or the mutual principle would prevail. The main difference between these two methods of providing insurance protection is simple. The joint-stock companies aimed at charging a definite scale of premiums for the indemnity against loss by fire and the insured had no further liability. The mutual associations aimed at

charging small premiums and a considerable deposit which was liable for claims and, if the accumulated funds of the association were insufficient, then the insured might be called upon for further contributions towards meeting the fire losses. Barbon's Office gave the insured an option of selecting the method which they preferred. The earliest exponents of the mutual method were the Friendly Society (1683) and the Hand-in-Hand (1696) and as late as 1714, when the Union was established for the purpose of insuring goods, as distinct from buildings, the insured were required to make a deposit of 10s. per cent. and were liable for losses by fire up to a further sum of 10s. per cent. on any single fire. The Sun Fire Office (1710) adopted the modern system both for goods and buildings of a definite premium without any further liability and the proposals contained the clause: "No person insured shall ever be liable to make any further payment or allowance towards repairing the loss or damage of any sufferer". This is the principle which ultimately prevailed and though we have two of the old mutual offices with us still—the Hand-in-Hand and the Westminster (1717)—their operations are conducted on the same general lines as those of the joint-stock companies with the important exception that as there are no shareholders to draw dividends the profits are divided among the insured, after provision has been made for reserves. The resources of these two associations are now so great that the liability of individual members for losses can now safely be excluded. It will be observed from this



brief sketch that there are three obvious methods of distributing losses, or in other words of obtaining insurance protection, either by municipalities, mutual associations where all the members are liable for contributions towards losses, or by joint-stock companies in which the shareholders are alone liable for losses and the insured receive a full indemnity on payment of a definite premium and are relieved from any further liability. This third method has prevailed no doubt on account of its practical conveniences and fully 95 per cent. of the fire insurance business of the world is conducted on this principle. But I would ask my readers to remember that there is no essential virtue in this method which will inevitably secure its permanence, and that it is subject to the competition of municipalities, of mutual associations, and, what is even more important, of private underwriters, and can only permanently remain in its pre-eminent position by paying constant attention to the needs and requirements of the public.

THE EQUITABLE DISTRIBUTION OF FIRE LOSSES.

Fire insurance companies are merely the machines by which the inevitable losses of fire are distributed so as to fall as lightly as possible on the public at large, and we have now to consider how this distribution of loss can be equitably carried out. It was perceived about two centuries ago that the only possible method was by classifying risks and by charging owners of property premiums depending on

the nature of their property and its liability to be damaged by fire. But for a very long time this classification was of the roughest kind and even now is a long way from being truly scientific. The original classification of buildings, at a time when goods were not insured at all, was into brick and timber, and timber buildings were charged twice as much as those of brick. The rates of premium were about 5s. per cent. for one year for brick and 10s. per cent. for timber, premiums which one can only describe as most moderate. One must remember that this was in 1681, before the days of fire brigades and building acts, and not long after the Great Fire had shown how immense were the perils of conflagration in London. With the advent of the Sun Fire Office in 1710 the insurance of goods, merchandise, wares, furniture, etc., began, and we find that the annual premium was 10s. per cent. without any classification of risks. But the inequitable character of this cast-iron arrangement soon led to its abandonment and by 1727 a classification was adopted which lasted for more than a hundred years. Under this classification insurances were divided into (1) Common, (2) Hazardous, and (3) Doubly Hazardous.

COMMON insurances were any buildings covered with slate, tile or lead and having the front, rear and side walls of brick or stone and wherein no hazardous goods or trades were deposited or carried on. The *minimum* rates of premium were 2s. per cent. per annum.

HAZARDOUS insurances were timber and plaster

buildings and goods and merchandise therein, not hazardous, or brick and stone buildings in which hazardous goods or trades were deposited or carried on. The *minimum* premiums were 3s. per cent. per annum.

DOUBLY HAZARDOUS insurances included all thatched buildings, all timber or plaster buildings, buildings wherein hazardous goods or trades were deposited or carried on and also the following trades or buildings: sugar bakers and distillers in brick or stone buildings, any china, glass or earthenwares, houses on London Bridge, and all mills. The hazardous trades and goods were apothecaries, chemists, bread and biscuit makers, ship and tallow chandlers, stable-keepers, inn-holders and malt-houses, hemp, flax, tallow, pitch, tar and turpentine, hay, straw and fodder of all kinds and corn unthrashed. The rates of premium on Doubly Hazardous insurances ranged from 5s. per cent. per annum. The *minimum* premium in all these cases was not determined by the nature of individual risks, except to the extent of the foregoing classification, but depended upon the *amount* of insurance. Premiums in those days were not *pro rata* whatever the sum insured but increased much faster than the amount insured. Thus the Sun's maximum limit of insurance in 1727, except by special agreement, was £3,000 on one risk and on common insurances for this amount 3s. 6d. per cent. was charged as against only 2s. per cent. on the same kinds of insurance for amounts under £1,000.

Although in the main the above classification

tended towards an equitable distribution of fire losses over the various owners of property, yet it was exceedingly rough and one wonders that it survived so long. Fire insurance is a purely experimental science and it was not until the various companies agreed to pool their experience that the determination of the cost of insurance in the several classes of risks was possible. Until this was done the diversity of views as regards the relative fire hazards of different buildings and trades remained considerable. In marine insurance there is no pooling of experience such as is now carried on under the auspices of the Fire Offices' Committee, and each underwriter has his own views as to what the premiums ought to be. Success in fire insurance management is still largely personal but not nearly to the same extent as success in marine insurance. The fire underwriter has the rates of premiums on fully three quarters of his business determined for him by the Fire Offices' Committee, but the marine underwriter has to decide over the counter what rate he will accept upon each individual risk—with few exceptions—which is submitted to him. There is thus a great divergence of view among marine underwriters as to what constitutes a proper rate of premium, and the rates vary not only among individual underwriters but also almost from day to day.

The first movement towards a combination of fire insurance companies, in order that minimum rates of premium might be determined on various risks, took place in Scotland in 1829, but it was not till 1858 that

the principal British offices combined and formed an association which is now known as the Fire Offices' Committee. A general understanding as regards the rates of premium on special classes of risks existed before and there were also in existence several actual tariffs, but there had been, before 1858, no systematic combination of experience. In 1855 the Sun Fire Office—which we may fairly regard as a typical company—continued to classify its risks as (1) Common, (2) Hazardous, and (3) Doubly Hazardous; and the descriptions of these classes did not differ in principle from those which I have described as existing a century and a quarter earlier. There were, however, a very large number of Special Hazards which were insured by special agreement. The lowest rates of premiums for the Common insurances were 1s. 6d. per cent. per annum, Hazardous 2s. 6d. per cent., and Doubly Hazardous 4s. 6d. per cent.; these were the *minimum* premiums and subject to exceptions.

We may take it that the modern era of scientific or semi-scientific fire insurance—for we are still much less scientific in this country than they are in the United States—began in 1858 with the foundation of the Fire Offices' Committee. It might be thought that as soon as the leading offices agreed together to combine their experience and be guided by the results the whole business would speedily be systematised and placed upon a logical basis. But here one would be in error. We are not logical in Great Britain—or perhaps I should say in England, for the Scottish nature has some claims to the logical faculty—we

are not logical and our method is to postpone reform until it is imperatively demanded. The insurance companies which send representatives to the Fire Offices' Committee are very diverse in character. Some do an exclusively home business, some range all over the world. Some make a success of classes of business which require a special study and which do not pay unless this special study is given. Thus it happens that whereas some companies would often like a new tariff to be made and rates advanced there are others which are fully content to remain as they are. As a general rule a new tariff is not drawn up unless there is a pressing and generally admitted need for it; it is not drawn up merely because an existing state of affairs is capable of improvement. The quality of conservatism in the British character explains why we are still a long way in Great Britain and Ireland from a complete classification of fire risks and a strictly equitable distribution of losses. The number of tariffs at present in existence is about seventy and they are being gradually added to. Old tariffs are also constantly being revised. But a large amount of ground is still uncovered and while there is a general understanding as to what the minimum rates of premium should be in some of the non-tariff risks in others there is much divergence of practice. The non-tariff business in the United Kingdom transacted by "tariff" companies comprises about one-fifth of the whole, and here the skill of the fire manager has full play, and he is in a somewhat similar position to his colleague in the marine insur-

ance companies. A good many fire managers will tell you that they much prefer non-tariff to tariff risks and more especially prefer dwelling-houses and other non-hazardous buildings which while not subject to tariff are yet subject to the rule which fixes 1s. 6d. per cent. as the lowest premium which may be charged by a company connected with the Fire Offices' Committee.

ESSENTIALS OF A TRUE DISTRIBUTION.

The methods by which the rates of premium in tariff risks are determined I will leave until later when the statistics and finance of fire insurance come under our consideration. My purpose for the moment is to deal with the distribution of loss. The only method by which this distribution can be effected is by making the insured pay in proportion to the risks incurred by them, and, from the very nature and complexity of fire insurance, it is a most difficult thing to arrange for this distribution. Trades can be classified according to their degree of hazard, provided that the experience of the fire insurance companies is laid before the Fire Offices' Committee, but even then we are some distance from a true distribution. We have to consider the size of factories and warehouses, the existence and efficiency of fire-extinguishing appliances, the crowding together of property or its isolation, and the changes in trade conditions. We ought also for a true classification to consider the financial position of the persons

insured and to decide whether it would be to their interest or otherwise to have a fire on their premises. For although no one is supposed to make a profit out of a fire yet unsaleable stock is sometimes conveniently got rid of by this means.

Although attention is paid to the "moral hazard," as it is called, by fire insurance managers, yet the size of their business and the number of people whom they indemnify prevents them from paying to it the same attention which the marine underwriter gives to this class of hazard. A marine underwriter knows by repute practically all the shipowners and merchants with whom he does business and he very frequently puts an owner on his black list and refuses to do any more of his insurances. This course is not necessarily taken on account of fraud but because in the opinion of the underwriter the owner does not exercise sufficient care in the navigation of his vessels. Lack of care probably causes many more losses to fire insurance companies than actual fraud, and yet it is in practice hardly possible to differentiate completely between the careful and careless trader and the careful trader has to pay towards the fires of the careless ones.

It is hardly possible to take into account all the factors which make up a fire hazard, more especially the personal factors, but it must be admitted that so far as they have gone the fire offices do try to distinguish between degrees of hazard in the same trade, principally by increased rates or penalties on constructions, substances or processes which in their view increase

the danger of fire. Thus, a tariff lays down a normal rate of premium for a trade if carried on under the most favourable conditions and then piles up additional premiums for all those conditions which increase the risk. While the increase of risk is thus penalised, encouragement is given by reduction of premium for the use of appliances, such as sprinklers, which assist to put fires out. In this way the insurance companies not only make a long step towards an equitable distribution of losses, but also powerfully help to prevent fires by making insurance cheaper for those who construct their buildings and carry on their works according to the most approved methods. By means of this system of penalties on dangerous construction or methods the rates of premium in a trade may vary enormously. In one tariff I had before me the other day the normal premium was 3s. 6d. and the maximum was about 40s. per cent., showing how great was the inducement for traders to diminish the risk of fire in every way possible. As individual warehouses or factories and their contents are sometimes insured for as much as £100,000 the additional charge for faulty appliances may run into more than £1000 per annum. Of course a power such as the tariff companies possess of enforcing high rating must be used with the greatest caution and discretion and anything like panic rates are most strongly to be deprecated. There have in the past been instances in which attempts were made to recoup heavy losses by rates which were higher than risks really demanded and

the result was the formation of mutual associations and non-tariff companies whose competition speedily led to a more equitable state of things. At present there would seem to be little real cause for general complaint. I have more than once of late had occasion to look into complaints which were conveyed to me and I have always found not only that the insurance companies were ready to give every reasonable assistance towards an investigation but were also able to justify fully the course which circumstances compelled them to take. In fact there are two striking pieces of existing evidence which show that the rates charged are *on the whole* no more than are required to distribute losses over the public. One is the moderate profits earned by the tariff companies.

The smallness of this profit will be clear if we take the figures of all the principal British fire offices for a series of years:—

Ten years 1886-1895.

Premiums	£164,500,000
Fire claims	£99,700,000
Agency commission and expenses	52,180,000
Increase of liability for unexpired risks taken as 40 per cent. of the increase in premiums	1,950,000
	£153,830,000
Net profit	10,670,000
	£164,500,000

The net profit of £10,670,000 earned in the ten years works out as 6·5 per cent. of the premiums. Of this sum 4 per cent. was applied towards strengthening

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the reserves and increasing the security of the public, and only 2·5 per cent. of the premiums was allocated towards the payment of shareholders' dividends. About three-fourths of the sums paid by fire insurance companies in dividends comes from the interest on their invested capital and reserves and one-fourth from their trading profits.

The trading of the last five years, 1898-1902, has been still less profitable than the figures given above, and there would have been little or no margin of net profit over the period available for dividends but for the favourable results of 1902.

Five years 1898-1902.

Premiums	£101,279,000
Fire claims	£60,405,000
Agency commission and expenses . . .	34,923,000
Increase of liability for unexpired risks taken as 40 per cent. of the increase in premiums	1,046,000
	—
	£96,374,000
Net profit	4,905,000
	—
	£101,279,000

This profit of £4,905,000 represents 4·8 per cent. of the premiums. The good year 1902 was utilised to strengthen the reserves of the companies which had been drawn upon in the bad years 1899 and 1901.

The other piece of evidence is the notable failure of non-tariff companies to cut rates and live. The thing has been tried over and over again and failure has so constantly followed that the chances are much

against any new non-tariff company being able to transact business profitably. I hope there will always be non-tariff companies as I believe all competition to be wholesome and a monopoly to be as demoralising in insurance as in other businesses, but at present the amount of business done by them is infinitesimal, less than 1 per cent. of the whole fire insurance transactions of British companies.

THE SCOPE FOR EQUITABLE DISTRIBUTION.

But although we may fairly admit that *taken as a whole* the joint-stock fire insurance companies distribute losses over the community with the minimum of profit to themselves, there is still ample room for greater differentiation among individual members of the public. Take the simplest objects of insurance, namely, private dwelling-houses of brick or stone, with tile or slate roofs. The minimum premium is 1s. 6d. per cent. per annum. Private houses are accepted freely at this rate and unless the circumstances are quite exceptional no higher rate is charged. Yet the risks in the case even of private dwelling-houses vary enormously. Consider a house in a good residential quarter of a large city with a fire brigade within a few hundred yards; consider the same house in a country town or village with little or no means of extinction; take again the same house in a shop quarter or in a quarter where there are factories or warehouses not far distant. The same house would, under these different conditions,

be subject to altogether different risks of fire, yet what company, unless there were a glaring increase of risk, would charge more in one case than in another? The positions of buildings are in a few cases taken into account in rating just as much as is their construction or the trade which is carried on in them. For example, the whole of Belfast is subject to special rates on account of the defective fire-extinguishing system and the Cripplegate area of London—the area in which are situated the London Manchester warehouses—is similarly penalised on account of the proved risks of conflagration. But generally speaking there is a lack of a uniform and carefully devised system in this country of distributing losses, and the fire insurance rating is taken in hand, like the national legislation, to meet admitted defects and not in order to work out a logical and comprehensive scheme. The tariffs do, as I have already mentioned, tend to improve risks by penalising faults and hazardous features but they fail to set up clearly a standard risk, that is, to set up a model for the best buildings, the best machinery and the best conditions for the particular business to which they apply. The standard risk can to some extent be inferred from them, but it is not explicitly defined and loses much of its direct effect.

THE AMERICAN MERCANTILE SCHEDULE.

I am referring of course to the United Kingdom for in the United States fire hazards are analysed and classified much more completely than has ever

been attempted in this country, and there is there a wonderful piece of analysis called the "Standard Universal Schedule for rating Mercantile Risks". This Universal Schedule has been subjected to much criticism and has not always been followed in practice for we have had fierce rate-cutting in the United States since it was drawn up, but it stands as by far the most scientific and complete exposition of the different nature of risks, not only as regards trades but as regards environment, which is to be seen in the world. As the British fire insurance companies do a large amount of American business, I may perhaps with advantage give here some brief account of the United States Universal Schedule. It will be dealt with more fully later on. This is not necessarily a schedule to be slavishly imitated in this country but a consideration of it will stimulate the imaginative outlook of fire insurance students. It may be regarded as a valuable basis of discussion. We must remember that the more exhaustive and accurate the classifications of fire risks become—in other words the more perfectly the premiums paid by the insured are graded according to the risk actually run by them—the more the public will be convinced of the justice of the rates charged and the more nearly will fire losses be distributed equitably over the community, and this equitable distribution is the main purpose of fire insurance.

The American Universal Schedule sets up first a standard of environment, namely the CITY. A Stand-

ard City is described as one with wide streets, gravitation water works, adequate fire department and pipe service, and a fire record of loss for the previous five years of not more than five dollars annually per 1,000 dollars of insurance. That is a loss rate of half per cent. per annum of insurance. (The average premium in the United States of America is more than 1 per cent. per annum as against about 4 shillings per cent. in the United Kingdom.)

Secondly, the schedule describes a Standard BUILDING which may be regarded as a model of ordinary construction.

The first step then is to set up a key or basis rate for a Standard Building in a Standard City—an arrangement which corresponds with the *minimum* or normal rate in a British tariff.

Then charges are made for variations from the standards of construction and also for deficiencies in any city or town where they are below the standard in respect of water works, fire departments, building laws, inaccessible or narrow streets, fire record in excess of the standard already mentioned and so on.

Additions are also made for deficiencies in the buildings where they are below the specification of the Standard Building in respect of thickness of walls, quality of material, character of roofs and floors, and floor openings, area, height, skylights, heating or lighting; all these things are taken into consideration according to their tendency to contribute to the destruction of a building by fire.

It will be seen how the two standards of a City and

of a Building contribute to the determination of a rate of premium. A Standard Building in a Standard City would pay the minimum rate. If there was a deficiency in respect of one or other the rate would increase directly in accordance with the deficiency, but if both city and building were below the standards then the rate would increase according to both deficiencies.

Having ascertained what a building should pay for its inherent or structural hazard and on account of its presence in a particular city or town the schedule then deals with the charges which are dependent upon the nature of its occupancy.

A list of stocks, trades and occupations is given, over 1,000 in number, and two columns are arranged. The first contains the figure which should be added to the *building* rate to measure the danger of the occupancy by reason of its tendency to cause fires or as affording fuel for combustion—in the schedule's language “ignibility” and “combustibility”—and the second column contains the charge for rating the contents themselves, being the figure which should be added to a building rate to determine the rate which its movable contents should pay because of their susceptibility to damage from water, smoke, heat and so on. This treatment of stocks in relation to buildings is the characteristic feature of the United States Schedule. The rates fixed for stocks are almost invariably in excess of those charged for buildings, sometimes twice as much, according to the susceptibility to damage or the combustibility of

the goods. The schedule says: "In direct ratio as a building approaches the Standard construction, and in direct ratio, also, as the city in which it is located approaches the Standard City as to water works, fire-extinguishing appliances, etc., will the difference between a building and the merchandise contained in it increase; in other words, the better the construction and fire department the better will be the building as a risk compared with the stock, and the poorer the construction and fire department the less should be the difference in rate between the building and the stock". As Mr. Moore, the Chairman of the Universal Schedule Committee which was appointed in 1891, says: "Clearly the same amount should not be added even for the same stock to two different buildings where one is an exceptionally good building and the other an exceptionally poor one; there should be a greater difference between the building and stock rate in the one case than in the other". Also he says it is clear that "if the risk is within the reach of hydrants, steam engines, etc., and on an eight-inch or larger water main it should rate differently from another of like kind, even in the same town, if the other risk is not so fortunately located". In the United Kingdom this fundamental distinction between the rates for stocks and for the buildings containing them has received little attention and in nearly all the tariffs the rates charged for buildings and for their contents are identical. Among exceptions are Belfast warehouses, farming stock and Scottish shops. But the principle will, I think, be at

once apparent when it is clearly stated as in the United States Schedule. I am told that partial losses form 90 per cent. of the whole number of fire claims and that in nearly every case of partial loss the percentage of loss to value is considerably greater on stocks than on buildings—sometimes four or five times as great. The principle is recognised, too, in the oldest and commonest form of fire insurance—that of dwelling-houses and their contents—the minimum rate for houses being 1s. 6d. per cent. and that for furniture being usually 2s. per cent. and sometimes much more for damageable articles such as pictures. It may also be of interest to point out that the same principle is of practically universal application in marine insurance, and the rates on cargo are usually from 50 to 100 per cent. higher than those on the vessel which carries them. The reason is that as partial losses form the vast majority of claims the cargo is susceptible to much more injury from a small casualty than is the hull of a vessel. For instance, if a steamer goes ashore with a cargo of sugar and the bottom is holed, the sugar will almost certainly be ruined but the hull will, in nine cases out of ten, be floated and repaired at a small proportion of the insured value.

Another feature of the Universal Schedule from which much may be learnt is the manner in which it deals with fire-extinguishing appliances. The Americans claim that in all other systems of rating all risks in a city are assumed to share equally in the benefit of a fire department, whereas a large

number of buildings, especially in outlying parts, may be on the lines of insufficient water pipes and remote from the services of a fire brigade. The schedule provides separately for all such deficiencies, and it also provides for stocks and buildings being separately treated as regards the means for fire extinction, since the efficiency and value of water-throwing facilities differ as regards stocks and buildings. As I pointed out just now, the British offices in the United Kingdom pay little systematic heed to the facilities for fire extinction, and dwelling-houses in country districts, situated far away from any adequate means of extinguishing a fire, are commonly charged the same premium as similar houses protected by the most efficient of modern appliances. In order to take the accessibility of fire-extinguishing appliances into account it would be necessary to follow to some extent the American Schedule and formulate a detailed minimum standard of the means or appliances needed for fire extinction, with which all normally rated tariff risks and all risks subject to the *minimum* rate of 1s. 6d. should comply; any deficiency in the means of extinction would involve an addition to the rate in accordance with the estimated risk. A reduction could also be made from the rate, in certain cases, for specially efficient appliances in excess of the standard.

I shall have occasion in the chapter on Rating to discuss further the principles of the American Universal Schedule and to examine the merits of elasticity which it possesses. This elasticity would

appear to be lacking in the tariff system of the United Kingdom. Under the Universal Schedule the fire record of a city is taken into account in computing rates both at the beginning and end of the term for which rates are computed, and no other schedule has ever recognised this important principle which seems to me vital if we aim at distributing losses equitably. If at the end of a given term under the schedule the percentage of loss to *premium* is less than 55 per cent. a reduction of 1 per cent. is made for each 1 per cent. of reduction in percentage, so that if the loss percentage were reduced to 40 a reduction of 15 per cent. in premium would be allowed on renewals. Under this system it does not greatly matter if the individual charges under the schedule are too high or too low since the automatic adjustment to actual fire record will quickly tend to adjust rates to a proper basis. This arrangement is not only equitable, but is a complete answer to those who object to a tariff system on principle as a combination adverse to the public interests, and, moreover, tends to adjust the rate to improved conditions and generally to diminish the severity of fires, since the insured know that they will receive full credit in premiums for all the improvements in practice which is due to those conditions.

THE INDIVIDUAL TRADER.

This brings us to the weak point of the British joint-stock system of fire insurance. An insurance company is selling for cash in advance an article of

which it can only roughly estimate the true value. It knows what the average rate of premium must be over a whole trade in order to meet the past losses of that trade, but it pays little heed to the individual trader. The tariff, with its normal rate and its penalties for conditions which add to a risk, certainly does a good deal towards establishing an equitable arrangement, but there is no automatic system of reducing or raising rates, if in individual cases, or in different cities or towns, this course may really be just. The pooling of experience and formation of a tariff is essential to the equitable rating of individuals, and the fault of the British tariff is in not going far enough. What is wanted is not less of the tariff system but much more. Fire policies in this country run for twelve months only, as a rule, and an office can cancel those which do not appear to be profitable and can thus avoid heavy losses, but while the protection for the companies is fairly complete there is less regard for the protection of the public from excessive charges *in individual instances*. The tariff rates can on an average be fully justified but their incidence as applied to individuals cannot be justified so easily even if they can be justified at all. The old mutual system had some advantages under which the hat was sent round to pay for the losses by fire, though there must have been much difficulty in estimating the proper contributions from individual policy holders. Some British offices, such as the Hand-in-Hand, Westminster, and Essex and Suffolk Equitable return their profits to the insured in pro-

portion to the premiums paid and this method, rough as it may be, must in the long run adjust most ordinary inequalities in rating. For those which pay the most premiums get the larger bonuses. The County Fire Office, a joint-stock company, also returns part of its profits to the insured. But with these exceptions the British system shows a rigidity and lack of elasticity in individual instances which I must say is capable of great improvement. A similar criticism can be levelled at the practice of marine insurance and possibly accounts for the number of mutual clubs which flourish in that branch of business. Under an ideal insurance system the insurance companies while making a reasonable profit for the risk which they run—and they do no more than that now—would so distribute losses over the community that each person would pay precisely in accordance with his risk and would moreover know and be satisfied that he was paying no more than his due. In life assurance the data upon which the rates are based is so accurate and these rates are graded so carefully according to risk that we almost reach a perfect system, more especially as the profits, or most of the profits, are returned to the insured. But life assurance, whatever actuaries may say as to its difficulties, is simplicity itself compared with the practice of fire and marine insurance, and we must expect these businesses always to have a less scientific system. We are not dealing with a fairly constant risk, such as that to human life, but with infinitely varying risks and infinitely varying conditions con-

cerning which the data is still to a large extent buried in the books of individual insurance companies.

LIMITATION OF RISKS.

I have dealt with the machinery by which fire losses are distributed over the public and to some extent with the means by which that machinery seeks to make the distribution equitable. I have now to consider the principles by which the fire losses of a town or a country are divided up among the various companies which undertake to indemnify property owners against loss or damage by fire. A company has to bear in mind two things, first the risk of fire in individual buildings and secondly the conflagration risk or the danger that a fire beginning in one building will spread to others. Its managers aim at limiting their liability so that they do not lose more than a certain amount on any one fire, however big it may be. My readers may remember that the Sun Fire Office nearly two centuries ago used to charge higher premiums for covering property for £3,000 than for £2,000 or £1,000, and this system was generally followed at the beginnings of fire insurance. It served two purposes : the prevention of over-insurance and the limiting of a company's risk on a building. The method of increasing the rate of premium according to the amount of the insurance has long since been abandoned, but the limiting of risk on any one building, or on any block of buildings, is watched as closely as ever. In order that any one

fire may not bring a heavy loss upon a company a limit is set of, say, £5,000 which it will retain upon a building and, say, £10,000 upon any "block" of buildings which are connected with one another or separated only by narrow passages across which a fire may spread. Towns are for the purposes of fire insurance divided up into blocks and large scale plans are published showing how the buildings are situated as regards one another, the width of streets, the presence of blind alleys, stairways, skylights and so on. The careful fire manager before deciding how much he will hold upon an important building or block will send one of his surveyors whose duty it will be to report upon the characteristics of each block. Short of going up in a balloon to take a bird's eye view, a good surveyor will use every practical means of studying the buildings to be insured and report to his chief. If a block consist of non-hazardous buildings well separated from one another by proper party walls a fire manager may accept a heavy line, but with hazardous warehouses in a district which has a bad fire record—such as Cripplegate—he will be content with a comparatively small sum at risk upon a block. This limitation and subdivision of risks so that they may be spread as evenly as possible all over towns and countries, in accordance with the various fire hazards, is part of the most important work which a fire manager has to do, and the manner in which he does it is quickly seen in his proportion of fire losses to premiums. In practice policies are issued to almost any amount by

individual companies, but after deciding on the amount to be retained at the risk of the issuing office all the rest is reinsured or divided up among other companies in the proportions which they are willing to accept. The limitation of risk and reinsurance is of the essence of all insurance and is the means whereby luck is eliminated and casualties are prevented from bringing in more than a known amount of claims. A similar system is followed just as carefully in life assurance and marine insurance.

Successful insurance depends upon the study of the law of averages and in allowing this law to have full play. There should be no speculation or luck about it whatever. The probability of the burning or escape of one building is uncertain and might form a subject of gambling, but when we have to do with tens of thousands of buildings spread all over the country under conditions which may be ascertained with precision all speculation disappears and the risk is calculable with sufficient exactness for practical purposes. A small company doing business in a restricted territory might be subject to luck and so might a company which took an unduly heavy line upon any one risk, but both these uncertainties are eliminated by extending operations over as wide an area as possible and by severely limiting the amount at risk in any probable fire. Of course fires have occurred, principally in the United States and Canada—such as Chicago, Boston, and St. John, New Brunswick—which have been so extensive as to upset all calculations, but these are of rare occur-

rence and it is to meet such exceptional hazards that large reserve funds are accumulated. In the recent Baltimore fire no British office lost more than £250,000, and the losses were very evenly spread in proportion to the business done. As a wide area is necessary and a limitation of risk also, it will be seen that individual traders cannot carry their own insurance with prudence, although a large number of traders may combine together for the purpose, and that no municipality can within its own limited borders hope to conduct fire insurance successfully. It would not have a sufficient area of operations and unless it reinsured largely with companies and other municipalities it would have to accept unduly large amounts upon individual risks. The great fire insurance companies have little or nothing to fear from the competition of municipalities, but their pre-eminence at the moment over mutual associations, private underwriters and non-tariff companies should not blind them to the obvious defects of their system.

CHAPTER III.

FIRE INSURANCE POLICIES.

I HAVE dealt with the general principles on which the fire insurance contract is based and those which regulate the distribution of losses due to fire. We have now to consider fire insurance policies themselves and the terms and conditions under which they are granted. This is a specially important subject at the present time as the attention of fire managers is directed towards simplifying policies and, if possible, of arriving at a form which will be used by all the offices connected with the tariff. It has not yet been found possible to agree upon a common policy form, but from 1st March, 1904, all policies issued by tariff companies will conform with certain general principles. A uniform policy has been desired for a long time but it is not the British custom to undertake a reform until its necessity is urgently made manifest. I am not aware of any considerable demand on the part of the public for simplicity in the fire insurance policy, but there can be no doubt that simplicity is in itself a highly desirable thing, and if it can be reached without any sacrifice of essentials the popularity of fire insurance will undoubtedly be increased. But it is as well to remember that simplicity is not everything and it is more important that the public should thoroughly understand their legal position and what

they have to do in the event of a fire occurring to their property than that they should have a policy which could only be interpreted for them by a lawyer skilled in insurance law. A policy should be sufficiently explicit to leave no doubt in the minds of the insured as to how a claim should be made and under what circumstances fire insurance companies are liable. The language of a policy should be as simple as possible so that it can be comprehended at once by an ordinary intelligent man and certainly in this respect there is much room for improvement. Many years ago an English judge said : "A policy of insurance has at all times been considered in courts of law as an absurd and incoherent instrument, but it is founded on usage and must be governed and construed by usage". It is not in the least necessary that a fire insurance policy should be either absurd or incoherent, and if the present movement results in this reproach being altogether removed then much good will result.

Whatever may be said against the fire insurance policy it is simplicity itself compared with that of marine insurance. The marine policy dates from the sixteenth century and it is quite a common thing for judges to make humorous comments upon it. A high insurance authority has described its clauses as pegs upon which legal decisions have been hung and apart from these decisions the clauses convey little or no meaning. There is an enormous amount of case law in connection with marine insurance, so much that during the last two sessions of Parliament

attempts have been made to pass an Act codifying the law. Although the Marine Insurance Bill had the support of the interests concerned and of the Government it has hitherto been blocked by an enterprising Scottish member. There is no such overwhelming mass of law in connection with fire insurance, and main principles as laid down in various cases are comparatively simple. It will be understood that I am not a lawyer and make no claim to a special study of insurance law. But as regards the fire policy I have had the honour for several months past of being in the confidence of some of the leading insurance managers who are working at it and have carefully examined the legal opinions expressed by eminent counsel upon the fire policy and its conditions. I am, therefore, in a position to explain in general terms how the law stands.

LIBERAL RATHER THAN LEGAL INTERPRETATION.

Although no such instrument as a standard universal policy exists in this country there is in New York a Standard Policy. It was drawn up by a Committee of the National Board of Fire Underwriters, and the policy form, which has since been adopted in some other American States, is based largely upon the deliberations of this committee. The chairman of that committee has described the difficulty which was experienced in drawing up a contract which would be just alike to the companies and to the insured. That is the prime difficulty. In repeated instances phraseology which seemed so

nearly right that a unanimous vote could have been secured upon it was afterwards found defective in one respect or another. Mr. Moore, the chairman, says: "I believe this task of formulating contracts which shall cover all classes of risks and all conditions of hazards is the most important one connected with the business of insurance. The ablest lawyers should be employed but lawyers alone could not deal properly with the question without the advice and judgment of underwriters whose experience as to the construction of clauses and the handling of claims would be absolutely necessary for the proper performance of the task. They would in fact be more independent of the lawyers than would the lawyers be of them." I quote this passage because it seems to me to express clearly the relative importance of lawyers and fire insurance managers in the drafting and interpreting of insurance contracts. It is commonly said among insurance people that the less lawyers have to do with insurance the better for the business. This is not meant in any disrespect for the many able and honourable practitioners of law, but because the attitude of mind of lawyers and fire insurance (and any insurance) managers are to a large extent incompatible. A lawyer looks to the wording of a bond and to its strict legal interpretation, but an insurance manager knows that in many cases it would be excessively bad management and be most unjust to the public to insist on the wording of the bond. In practice, therefore, the enlightened manager interprets his contracts by a sense of justice

towards his insured rather than by rules of law. He corrects any unforeseen injustice in the contract by liberal administration.

It is to this enlightened sense of the obligations of insurance companies towards the public which has trusted to them, that the general reputation of the companies for honest and liberal methods is due. A maxim of insurance is that the companies exist to protect their insured and it is their duty to protect their insured even though mistakes have been made or acts committed in good faith which in strict law might vitiate a contract altogether. To give an example: most policies have contained a clause saying that if anything is done by which a risk of loss or damage by fire is increased a policy will be void unless the sanction of the company is obtained by memorandum. If this were always insisted upon much injustice would be done since buildings insured by owners are often in possession of occupiers over whose actions the owners have no direct control and of which they are ignorant. A fire occurred not long since through the tenant of a building placing a cauldron of tar temporarily in the cellar. The tar was in course of use on some part of the premises. The landlord, who was the insured, had in strict law forfeited his right to insurance protection, but the office in which the property was insured very properly declined to consider the policy void. Here an adherence to legal rights would have caused rank injustice. Examples such as this show how difficult it always must be to word a fire insurance contract

so that it will protect the rights of insurance companies and at the same time be just to all honest claimants. Note the word honest. The fact that there are unhappily dishonest claimants compels the companies to insist upon a contract which will be strong enough to protect them against fraud. It thus often happens that clauses which are necessary as protection against fraud will be too severe upon the honest insured.

SIMPLICITY IN POLICIES.

The early fire insurance policies were much more brief than those which we now are accustomed to, but it does not follow that they were simpler. They were not. The policy formed part of the contract only and the insured was bound in addition by the "proposals," as they were called. These proposals set out the conditions of insurance and corresponded with a company's prospectus. Nowadays a fire insurance company's prospectus is usually very brief; the whole contract and information for the insured is contained in the policy itself. In the case of life assurance the policy is often of the briefest description and the insured has to go to the prospectus of the issuing office in order to get information on many points which concern him. It is important to bear in mind that no simplification of a fire policy is much use to the public if people have to go to a prospectus for information, and that the ideal policy, while protecting the interest of an insurance company, would at the same time give the insured a contract to which

he could take no reasonable objection and leave him in no doubt how he stood. It is very little use to give him a document which looks simple but which he would have to take to a lawyer before he could make a claim upon a company or do one of the many things which he might desire to do during the currency of the policy. *The ideal policy should tell everything which it is necessary for a policy-holder to know in as clear language as possible, and should not by means of complicated clauses or involved terminology enable a company to get the better of him.* Insurance involves the fullest faith on both sides and a policy should be a clear expression of good faith.

The precise wording of a policy or of its conditions is subject to so much change that I shall consider rather the objects which are sought to be obtained than the means which are used to obtain them. If I can make clear the reasons for the various clauses and conditions then the wording will be of less importance, since all that we need are such words as will clearly express the desired objects. Efforts are now being directed towards this clearing up of what the policy is intended to effect and towards expressing that effect without verbiage. By going into the reasons for the various parts of a fire insurance we shall have an opportunity of noticing many interesting points of principle and practice. If one comes to think of it, a fire insurance policy, properly considered, is an epitome of the law and practice of fire insurance, and it cannot be fully understood unless one has a considerable familiarity with the manner in which

the business is transacted and the way in which that business has grown up.

THE FACE OF A FIRE POLICY.

Now let us come to the policy itself. A policy must contain the name of the company or other person or body issuing it and the name of the person insured and a description of the property covered by the insurance. It also contains the *sum insured* which, as I have already explained, *is not a measure of value but merely the amount beyond which the liability of the company issuing the policy does not go*. The rate of premium is given and the insurance usually runs for a year. The first premium is in practice calculated from the day on which the risk begins up to a quarter-day about a year ahead and the renewal premiums are calculated for complete years. I am omitting cases in which policies are issued for periods of less than a year or for several years together; these cases present no special features of interest. In the vast majority of cases in the United Kingdom fire insurances run from year to year and may be terminated by either party at the end of each year. A life policy, on the other hand, is a contract in which the issuing company undertakes to accept renewal throughout the period originally agreed upon, and though the person insured may terminate it at any time the insurance company cannot. The fact that the fire insurance policy is usually an annual contract which need not be renewed unless a company so chooses is

the principal protection which insurance companies have either from undesirable policy holders or from inadequate rates of premium. It is part of the ordinary practice of insurance companies not to accept liability for damage from fire until after the premium agreed upon or a deposit has actually been paid. The full detailed policy is not necessary in order to make a company liable since it was established many years ago that an agent's temporary covering note will, when stamped, be sufficient to establish a claim. This covering note is, in fact, a temporary policy. In the Supreme Court of the United States it has been held that a contract of insurance was completed by a letter from the insured accepting the terms offered by a company and enclosing a cheque for the premium although a fire occurred *after* the letter of acceptance was posted and *before* it was received by the company. It is necessary when a proposal for fire insurance is declined that the proposer be informed by the company as well as the agent through whom the business came, since if the agent neglected to inform the proposer and a fire in the meanwhile occurred the company would be held liable under the temporary covering note. This temporary cover runs for fourteen days. I am using the word agent with the meaning of agent of the company. If a proposal were made to an office by the agent of a proposer—say his solicitor—and the proposal was declined, intimation to such agent would free the company from liability in the event of fire occurring after the intimation to the agent but before the agent had time

to pass on the information to his principal. People generally speaking are bound by the acts of their agents, whether they be companies or individuals, when the agents are acting within the limits of their authority.

The system of temporarily covering property pending the decision of a company's directors to accept a risk is done in the interests of the public and in order that any one may obtain insurance protection immediately on payment of the premium. The temporary cover is necessarily subject to the approval or rejection of the chief officials since otherwise a company would have no guiding hand upon the acceptance of risks but would be at the mercy of the caprices of individual agents all over the country, many of whom have little knowledge of fire insurance business. In marine insurance risks are accepted or rejected by the principal officer or underwriter and the number of officers who have the directors' authority thus definitely to accept or reject risks is very small. A fire insurance agent is generally engaged in other occupations, although in the United States insurance agency is often a separate business. A marine insurance agent, say at a foreign port, is a highly responsible official who usually is engaged exclusively in insurance and shipping business. Thus, while a fire insurance company will have thousands of agents, a marine insurance company will have a dozen or a couple of dozen according to its size. The different manner in which risks are accepted will make it clear why fire insurance companies insist

upon the payment of premium or of a deposit before they accept liability. The payment is a guarantee of good faith to some extent and also saves fire companies from running up a multitude of small accounts with the risk of bad debts. But a marine insurance company is dealing with merchants or insurance brokers whom it knows, and the brokers are dealing with clients whom they know; a marine company does not therefore require payment of premium before the acceptance of liability and the premiums are not usually paid until after the first week in each month. Underwriters at Lloyd's sometimes allow their premium accounts with brokers to run unsettled for months together. But since fire insurance companies and agents are concerned with an enormous number of proposers all over the country, of whose financial position they have no means of knowing much, they must insist on cash in advance.

The policy of fire insurance then assumes that the premium or a deposit has been paid, and recites circumstances under which liability will be incurred. The most modern of policies accept liability for loss or damage from fire or lightning, or by explosion of gas or of boilers used for domestic purposes. Some companies have not yet admitted the liability for bursting boilers, but fire, lightning and gas explosions are usual. It is not necessary that the face of a policy of fire insurance should contain more than the few particulars which I have already referred to in order to constitute it a complete and valid contract of insurance. If such a contract were executed by a

company and stamped with a penny stamp it would be a policy of indemnity subject for its interpretation to the general principles of common law and of the decisions of judges on various points. There would, however, be nothing in the nature of instructions or directions to the insured, and if a claim arose under it, a policy holder could sue forthwith in the public courts if his demands for compensation were not granted. It does not necessarily follow that such a contract would result in many legal actions, for no sensible man goes to the law courts until he has tried all reasonable means of negotiation. As a matter of fact the direct policies issued by members of Lloyd's—those policies, that is, which do not merely follow the terms and conditions of a company's policy on the same risk—very much resemble the simple contract I have described. Here is a Lloyd's form which many of my readers will probably never have seen.

LLOYD'S FIRE POLICY.

In the Name of God. Amen. Whereas

John Smith

FIRE POLICY.

paid Premium or
 £ Consideration to Us, who have hereunto
 —————— subscribed our Names to Insure from Loss
 —————— or Damage by Fire.

No.....

Now know Ye, That we the Insurers do hereby bind ourselves, each for his own Part and not One for Another, our Heirs, Executors, and Administrators, to pay the said John Smith, his

Executors, Administrators, and Assigns, all such Damage and Loss by Fire, not exceeding the sum of

within Thirty Days after such Loss is proved and that in proportion to the several Sums by each of Us subscribed against our respective Names.

No claim to attach to this Policy for Insurrection, Riots, Civil Commotion or Military or Usurped Power.

IN WITNESS whereof We have subscribed our Names and sums of Money by us Insured.

Dated in London, the Day of
 One Thousand Nine Hundred

It will be as well to bear one point in mind in connection with this policy. Though called a Lloyd's policy it is not really one at all. That is to say, it is not officially recognised by the Society of Lloyd's, and is not subject to the Lloyd's Act which is the Act of Parliament incorporating the Society. A true Lloyd's policy is impressed with the official stamp (an anchor) around which are printed the words: "For signature by underwriting members of Lloyd's only". Then appears the notice: "Any person not an underwriting member of Lloyd's signing this policy, or any person uttering the same if so subscribed, will be liable to be proceeded against, under Section 31 of Lloyd's Act". It will be observed that a Lloyd's policy can only be signed by underwriting members of Lloyd's, while the fire policy which I have printed might be signed by anybody whether members of Lloyd's or not. Strictly speaking there are no official Lloyd's policies except on risks connected with marine insurance, and the deposits or guarantees lodged with the committee by underwriting members of at least £5,000 each are applicable only to the settlement of claims arising under insurances connected with marine and transit risks, or on risks incidental to transit, such as those of property on wharves or quays or in warehouses. Not only, therefore, do the public who accept Lloyd's policies fail to receive the protection of the £5,000 deposited by each underwriting member, but they also have no positive assurance that their policy is signed by underwriting members of Lloyd's at all. I may say,

however, that in practice no respectable insurance broker or underwriter would allow himself to be connected with a fire insurance policy issued with the name of Lloyd's upon it if any signature appeared which was not that of an underwriting member.

The reader will observe in the Lloyd's policy that the only condition, other than that of the payment of premiums, is contained in the clause excluding damage through insurrection, riots, civil commotion or military or usurped power. Some such clause as this has appeared in fire insurance policies since 1726 when the Sun Fire Office excepted rebellion, and in 1727 added civil commotion. The Royal Exchange Assurance Corporation's clause at the same date was, "No loss or damage by fire happening by any invasion, foreign enemy or any military or usurped power whatsoever to be made good," and a clause worded in almost the same manner was contained in the Sun's proposals or conditions of 1727. There had been a rebellion in 1715 and there was another in 1745, and the early fire insurance managers felt the danger of insurrection, rebellion or usurped power to be very real. It is not difficult to see why this exclusion is found necessary at the present time. The dangers covered by it are altogether outside the ordinary risks of property, and to indemnify owners for damage resulting from them is beyond the functions of an insurance company unless it makes it a special business to cover them. It is the business of a government to protect the persons and property of its subjects from hostilities and invasion, and it is

the business of municipalities to protect citizens from loss through riots and civil commotions. I am not enough of a lawyer to say what are the precise remedies which a private person has against either a government or a municipality, though I believe as regards the latter he would be entitled for full indemnity supposing, say, his house were burnt down during a riot. In marine insurance, underwriters, as a general rule, exempt themselves from paying indemnity for loss due to capture, seizure or detention at the hands of an enemy and also for the consequences of riots and civil commotions. When war has actually broken out or is imminent it is the practice of marine underwriters to accept these risks in return for premiums paid for that specific purpose, and there is always a large business done in these war risks whenever there are hostilities or fears of hostilities. But, generally speaking, and unless as the result of a special contract, marine and fire insurance companies exclude all the exceptional hazards due to war, invasion or civil disturbances. In practice this exemption is not always effective. *Damage from war or civil commotion must be direct consequence, not merely an approximate consequence.* A riot, for instance, is not merely a scrimmage among disorderly persons; it is a subject of precise legal definition. If in a disturbed state—say during a strike in a manufacturing town—property gets set on fire, it must be definitely shown that this is not the work of a stray incendiary, even though a striker; it must be shown to be the direct consequence of a

riot or civil commotion as legally understood in order to exempt insurance companies from liability for damage. This is a peaceful country, and I cannot recall an instance from recent events in fire insurance, but I can give you one from those in marine insurance. A large French steamer was blown up last May (1903) at Salonika by a bomb put on board by a Bulgarian. The Ottoman Bank was blown up the following day and there was no shadow of doubt that both outrages were of a political character due to the revolution in Macedonia and the disturbed state of the population of Salonika. Yet the act of an individual Bulgarian with a bomb did not constitute either a civil commotion or an act of war, and the underwriters paid for the loss to the vessel's cargo which the outrage caused. On the other hand there was recently at Montevideo a serious strike among dock and wharf hands. They marched down to the quay, and in spite of the efforts of police and soldiers set fire to much cargo which was awaiting shipment. This was a riot, and underwriters who had excluded the risks in their policies were exempt from liability for the loss. The loss or damage must be caused by a riot or hostilities of a character which will satisfy the definition of these things by the law of various countries, and must be the direct consequence.

The Lloyd's policy I have shown you has no conditions or instructions to the insured as to their procedure in the event of claims arising. The omission matters less in this case than it would do in a company's policy. Lloyd's underwriters do not deal

direct with the insuring public. Business is brought to them by insurance brokers who are skilled in all its details, and claims are made through these brokers who know precisely what procedure should be followed. The existence of a skilled intermediary does away, to a large extent, with the necessity for policy conditions. The Lloyd's policy I have given is *one of indemnity, and unless values are expressly admitted is not a valued policy.* In practice, as I have previously said, Lloyd's underwriters do admit values, both of buildings and goods, where they have reason to believe that this course can be safely pursued. It is important also to notice that the policy money is payable to "executors, administrators and assigns," and the policy, unlike a company's contract, is assignable of right without evidence of the interest of the assignee. This departs from one of the most important of fire insurance principles.

PRELIMINARIES IN FIRE INSURANCE.

Before going on to deal with the conditions under which fire insurance policies are issued by companies we may profitably pay some attention to those preliminaries which are necessary if the insured or his property are to be fully described and he is to be in consequence adequately protected by insurance. The first essential is the proposal form which is the basis of the contract. The validity of a policy depends upon the good faith with which this form is filled up. Any material error in the information given in it or

suppression of any material fact as to the risk which a company ought to know may be sufficient to void the policy altogether. It is therefore important that this form should be filled up by the insured himself and not by any agent of the company who is approaching him for business. If the agent of a company fills up a proposal form he is, for the time being, acting as the agent of the proposer and it is the proposer and not the company which will suffer from any mistake or other incorrect statement which an agent may make in such proposal. The important work of filling up the proposal is not one which can be delegated to any person. The name, address and description of the person or persons insuring must be correct since the contract is a personal one. If the property is owned by John Smith trading as the "Imperial Supply Association" it would be correct for Mr. Smith to take out a policy in his own name provided that he was the sole owner without partners; but if there were partners and the property belonged to the firm then the insurance should be taken out in the joint names of the partners or in the name of the trading firm. It would also be a proper precaution to add to the name of the firm "or partners of the firm for the time being," but this would not be necessary if any change in partnership were duly notified at the time to the insurance company. An alteration in partnership would not necessarily be a change in ownership. It is of the first importance that the nature of a risk and the business carried on by the proposer should be fully

and correctly described. Not only should the insurance company be clearly informed what kind of risk it is expected to cover but the proposer should see that his description is sufficient to apply to all the goods he seeks to have insured. Where stock is insured by a trader without being particularly described, only the class of goods commonly kept by the particular trade would be covered. The wider the description the better. Many traders carry on more than one business and in order to insure protection they should make it clear that they wish the stocks held in connection with all the businesses to be covered. For instance, if a man was a draper as well as a grocer and he described himself as a draper only then his goods as a draper would alone be covered unless he specially included in his proposal form the goods which he held as grocer.

Goods which are insured must, as a general rule, be the property of the insured in order that he may recover any loss or damage from fire, and if goods which do not belong to the insured are upon his premises at the time of a fire they would not be covered unless this contingency were specially provided for. In practice it is common to word policies so as to include goods held by an insured "in trust or on commission," and sometimes the words "for which he is responsible" are added. *These words imply legal responsibility, not merely moral responsibility.* In warehouse policies the addition of the words "including goods sold but not delivered" is of importance to traders. It has been contended that as regards

goods sold but not delivered the insurance companies should depart from their general rule of not admitting values and allow that such goods should be valued on the basis of the selling price. As a matter of fact they have been sold and the trader's profit earned upon them and it seems only fair that the trader should be able to recover from an insurance company the same value as if they had actually been delivered to the customers who had bought them. The general rule that goods should be the property of the person who is insured is departed from as regards those goods as shown above for which the insured is legally responsible, and it is becoming the practice also to some extent to cover property for which the insured has a moral responsibility. For example, policies upon domestic furniture now explicitly cover all property in a house whether belonging to the insured, his family, or servants, and this reasonable extension of insurance protection is rapidly meeting with favour at the hands of insurance managers. An extension of the kind has, of course, two sides. It is an undoubted benefit to the public and that is the reason why it has been and is being adopted. But such an extension makes it more difficult for an insurance company to obtain satisfactory evidence of loss or damage by fire. The person insured does not know what property his servants have with them or what is its value, and in the event of a fire a company would be obliged to accept any reasonable claim which was made for floating property of this kind.

The insurance of goods held in trust or on commission was allowed from almost the earliest days of fire insurance, but the other concessions referred to are comparatively modern. For protection it is necessary that all extensions beyond the purely personal indemnity of the insured's own property should be specially mentioned in the policy.

As a fire insurance policy covers goods only in the premises described therein it ceases to attach if the goods are outside the actual premises specified, and traders who have merchandise in transit or in course of removal need a floating policy to protect them. Retail traders have sometimes found themselves dependent on the liberality of insurance offices through keeping goods in their houses when their policy only covered goods in their "shops". A description of the premises should be wide enough to cover all such temporary removals. I shall be dealing with removal under the policy conditions where it is laid down that the sanction of the insurance company is required by endorsement if the insurance is to attach to property removed. The latest furniture policies provide specially for this question of removal and allow for temporary removal to any private dwelling-house, lodging-house, hotel, club, safe deposit or bank in the United Kingdom. Property so removed is not covered to the extent of more than 10 per cent. of the total sum insured.

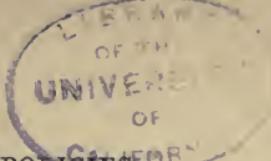
I think that what I have said pretty well covers the face of an insurance policy against damage from fire and we may begin to turn our attention to the

important clauses or conditions of insurance which appear usually on the back. The conditions may be divided into two classes, those which merely express or strengthen the common law rights of insurance companies and those which give them new rights to which they would not be entitled at common law. The tendency nowadays is to omit or much reduce the clauses which merely recite common law rights which exist, and to express those clauses which protect companies beyond what the law would give in a manner which will to the smallest extent prove burdensome to the insured. It must always be remembered that conditions and provisos in policies of insurance should be perfectly clear since they will be construed in law strictly against the insurance companies as they tend to narrow the range and limit the force of the principal obligation. This rule of construction has been definitely laid down in the United States' courts. We are dealing with common law and cases and decisions in the United States' courts are frequently referred to in our own courts when they tend to throw light upon common law principles.

MISDESCRIPTION.

The first condition of insurance relating to misrepresentation runs somewhat as follows:—

Any material misdescription of any part of the property expressed to be insured or of any building or place in which any of the property is stated to be contained or any misrepresentation as to or omission to state any fact material to be known for estimating the



risk renders the insurance void as to the property affected by such misdescription, misrepresentation or omission and any misstatement in answer to questions put by or on behalf of the company on the proposal form insurance renders this policy void.

The governing word in that clause is "material". In order to render the policy void the misrepresentation or misdescription or omission must be material. This is a clause which will almost certainly be often omitted in future as it is really of little use. I am informed that at common law any misrepresentation of a material fact will, if innocent, render a contract of insurance void with return of premium. If the misrepresentation of a material fact is deliberate then the policy is void and no claim for return of premium would be admissible. Misrepresentation may be active or be passive by silence or omission. It will be seen that the protection given by the clause is for all practical purposes given by the common law and that the clause is surplusage. There is just this to be said for it: its existence, if the proposer for insurance had it before him, might warn him to be careful in giving a full description in his proposal form of the property to be insured and the nature of the risk, but as he would in all probability not have the clause before him at this time its usefulness even in this respect is doubtful. As a direction to the insured it is clumsy and I much prefer an old clause of forty years ago which ran: "It is incumbent on every person desiring assurance from fire to describe clearly the construction of the building to be insured or containing the property to be insured; also to state the

nature of the goods or other property on which the insurance is proposed ; and whether there be any steam engine, kiln, stove, cokel, etc., furnace, oven or other implement for producing heat besides common fireplaces ". An instruction of that kind was useful and some such clause may be retained in some companies' policies. But the proper place for all instructions of the kind is the proposal form, a document which can hardly be too explicit in its directions to the proposer.

CHAPTER IV.

THE CONDITIONS OF INSURANCE.

I HAVE already dealt with the policy clause covering the misrepresentation or omission of material facts at the time of taking out an insurance, and showed that the protection of the companies by the common law is sufficient for all practical purposes and that there is no need for a special clause. Another clause which is of little use in its present form is that relating to the payment of premium or deposit in advance. It is quite sufficient to provide for this point by a few words in the policy itself. The policy could begin with the words: "In consideration of the premium for insuring for the first period and as hereinafter mentioned the company agrees with the insured," and so on. The policy itself would then form a receipt for the first premium and it would be for the company to make sure that the premium had been paid. *It is far better that all necessary conditions should be provided for on the face of a policy* where they have some chance of being read by the insured rather than stowed away in small type on the back. For though the insured is deemed to have read a contract into which he enters, yet the undoubted fact that

most fire policy holders do not do so is of considerable importance. No insurance company wants to have disputes and misunderstandings with its clients, however much the fault may rest with them, and it is to its interest so to frame policies that the purport can be readily grasped.

INCREASE OF RISK AND REMOVAL.

The clause relating to increase of risk and removal of goods is of great importance, partly on its own account and partly because of the diverse views which are held in regard to it. A common form of the clause until very recently was somewhat as follows :—

This policy shall cease to attach to any property if the danger of loss or damage by fire is increased, after the insurance has been undertaken by the company, by anything being done to, in, or upon any property hereby insured or any building or place in which any such property is contained, and (second) this policy shall cease to attach to any property which shall be removed from any building or place in which it is stated to be contained unless the sanction of the company to the increased risk or to the removal shall be obtained and in every case signified by a memorandum made on the policy by or on behalf of the company.

The part of this clause dealing with removal expresses, I understand, the common law rights of insurance companies and so far is not important. But it is useful as a direction to the insured that he must not remove property unless the sanction of the company has been obtained to a transfer of the insurance protection with it. There is no great

difficulty in this matter since the insured is in most cases the owner of the goods, and has control over removal and can notify without delay any changes to a company and obtain its consent. But as regards the first part of the clause, that relating to increase of risk, much difficulty and many hardships may arise. Here the insurance more particularly relates to buildings which would be insured by the owners or mortgagees and over which they could exercise little or no control. The control would rest with the occupier whose own insurances would be principally confined to the goods in the building. Thus while the occupier, by doing anything to increase the risk, without first obtaining the express sanction of the company, would void his policy on the goods belonging to himself, he would also void the policies effected by owners or mortgagees on the buildings in which the increase of risk took place. It might easily happen that innocent parties would in such a case suffer through no fault whatever of their own, and such cases do occur, especially where an owner or occupier has not had words protecting his interests inserted in his policy. I gave an instance in my last chapter of such a hardship, and mentioned that in this particular case the insurance company held the property of the innocent parties covered, and did not insist upon the rights of voidance given them by the clause. In the absence altogether of a condition as regards increase of risk, I believe the law is as follows: *A policy would not be vitiated absolutely by anything done to increase the risk,*

but the company would not be liable for any loss caused by the increase of risk.

My readers will see that this is one of the instances in which the policy clause strengthens the insurance company's rights under common law. Under common law it would be necessary to prove that the loss or damage due to a particular fire was caused by the acts increasing the risk if the insurance company was to escape liability. The policy itself would not be *ipso facto* voided.

It is generally agreed among fire insurance managers that the voidance of a policy due to the increase of risk is unfair and should be abolished. If the matter is looked at from the point of view of the innocent insured—say the landlord of many houses who has no control over the doings of his tenants—it will readily be seen how unfair such voidance might be. It is no doubt true that if a tenant committed an act which vitiated his landlord's policy, the landlord would have a right of action for damages, but a right of action against one who might be a man of straw is a very different thing from the protection of an insurance policy. I have seen a clause which, while saying nothing about voidance, goes some way towards strengthening the common law position. This clause runs: "If, after the insurance by this policy has been undertaken, anything be done otherwise than in and about the execution of ordinary repairs, whereby the danger of loss or damage to property hereby insured is increased, immediate notice thereof must be given

to the company". Immediate notice is the least that can be required. It is possible that a solution of how to deal equitably with the increase of risk will ultimately be found by taking a hint from the marine insurance policy. When a marine policy is issued covering a vessel or cargo for a definite voyage the contract contains a deviation clause. Under this clause deviation is allowed—it will be understood that deviation may often seriously increase the risk—if notice is given the underwriters as soon as possible and *a premium paid to cover the deviation* at a reasonable rate to be agreed upon. That seems to me to cover the difficulty. If the fire insurance companies gave up an insistence upon an increase of risk voiding a policy and instead required immediate notice with a reasonable premium for the increase of risk then they would be sufficiently protected. The risk is really a matter of premium. In marine insurance there is rarely any difficulty about agreeing upon the reasonable extra premium for a deviation, and there is no reason to suppose that more difficulty would be found in fire insurance. The greater the risk the greater the premium and in one marine case which was recently before the courts the judge fixed the amount of the reasonable premium for a hazardous act—which was included under the deviation clause—as the whole amount of the damage claimed for. In other words the underwriters were freed from liability. But if this change were made and property held covered though the risk were increased it would be necessary to abandon, to this

extent, the usual insistence of payment of premium in advance. The extra premium for the increase of risk could only be determined *after the act increasing the risk had been done*, and while the rate was being agreed upon it would be necessary as a matter of business to hold the property covered. It might happen, too, that the insured—if the owner of premises occupied by tenants—would not discover that the increase of risk had occurred until after a fire had taken place, and then the extra premium would need to be fixed as some set off against the amount of a claim. Most of those who have been brought up in fire offices will shudder at the idea of a premium being fixed and paid after a loss has actually occurred. But this is done every day in marine insurance and one great advantage of studying several kinds of insurance is that it shakes up the mind and keeps it from getting crystallised.

The power of insurance companies to disallow removal was taken at a very early date and we find in the Sun Fire Office's proposals for 1727 the following clause: "Persons insured removing their habitations or their goods and merchandise insured may preserve the benefit of their policies if the nature and circumstance of such policy is not altered but such insurances will be of no force until such removal or alteration is allowed by endorsement on the policy".

What seems to be needed is a clause not so much strengthening the common law in the interest of insurance companies as one strengthening the law in

the interest of the insured. While a company should require notice of removal or increase of risk it should not, I think, be possible to void a policy from either clause but, if necessary, to demand a premium commensurate with any increase in risk which might have occurred. In all cases where the assent of an insurance company by endorsement is required, if it is only for the movement of domestic furniture from one dwelling-house to a similar one, some clause is necessary for a technical, though sufficient, reason. *Unless an endorsement is in pursuance of a condition existing in a policy such endorsement is a new contract of insurance and requires a penny stamp.* It is obviously more business-like to provide for these endorsements in a policy than to be under the necessity of wasting money on the Exchequer by spattering the back of policies with penny stamps.

The tariff offices last autumn (1903) decided to use the following "Extension Clauses" so that property temporarily removed might not lose the protection of insurance :—

EXTENSION CLAUSES.

(a) Any articles of household or personal use or ornament hereby insured, temporarily removed from the dwelling-house named within to any other private dwelling-house or any club, lodging-house or hotel in the United Kingdom at which the insured may be staying, or to a bank or safe deposit (not being part of a furniture depository) in the United Kingdom, shall, if and so far as any loss or damage thereto shall not be otherwise insured against, be covered, while there, for a sum not exceeding in the

aggregate at all such places 10 per cent. of the amount of the sums hereby insured on the items in which the same are included. Provided that in case of loss or damage at the dwelling-house named within, the sum insured by each item of the policy on the contents thereof shall be deemed to be the sum so insured less the value of any articles of the description therein mentioned (temporarily removed) which at the time of the loss or damage may be covered at other places in accordance with this extension clause.

(b) Any of the contents hereby insured of a coach-house, stabling or harness-room named within, temporarily removed to any other coach-house, stabling or harness-room in the United Kingdom, shall, if and so far as any loss or damage thereto shall not be otherwise insured against, be covered, while there, for an amount not exceeding the sum insured on such contents by this policy. Provided that in case of loss or damage at a coach-house, stabling or harness-room named within, the sum insured by each item of the policy on the contents thereof shall be deemed to be the sum so insured less the value of the contents of the description therein mentioned (temporarily removed) which at the time of the loss or damage may be covered at other places in accordance with this extension clause.

INSURANCE OF RENT.

Although the subject of the rent of properties destroyed or damaged by fire has not directly anything to do with policy conditions I may deal with the matter now as it has of late been given some prominence. The ordinary practice of insurance companies is to issue policies covering loss of rent on buildings through the occurrence of a fire at the same rate as for the buildings themselves. A non-tariff company has recently issued a new furniture policy in which a tenant is indemnified for having to pay rent on a damaged building for a period of not more than six months and to the extent of not more than

10 per cent. of the sum insured. Thus an insurance of £1,000 on household furniture carries with it, free of extra payment, a rent insurance up to £100 to cover the period of six months or less while the house was being made habitable, or a similar indemnity covering mortgage interest or other liability. There may not be much in this as a benefit but I think that it is important that the liability for rent in England should be brought more prominently before the insured, and if it can be done by combining insurances on furniture with an insurance on rent so much the better. I believe in composite insurances; policies which will indemnify one from loss by fire, by burglary and through liability for rent would clearly be convenient. The law as regards rent in reference to fire damage is of interest and the public cannot be too familiar with it. In Scotland if premises let have been so far damaged by fire as to be unfit for occupation the tenant is relieved from the payment of rent. But in England a fire does not affect, still less terminate, a tenant's liability for rent during the currency of his lease unless such liability is expressly exempted in the lease. At one time it was held that a landlord could not compel a tenant to pay the rent of a burnt house if he refused to lay out the insurance money in rebuilding, but this doctrine—which to any one but a lawyer would seem elementary justice—was contradicted in "*Loft v. Dennis*" (28 L. J. Rep. 2, B. 168). The landlord claimed and obtained the insurance money and refused to rebuild though the

amount received was sufficient. The court held that the tenant, though there was no house and no prospect of a house, was still liable to pay the full rent on the ground that according to the law of England where there is an absolute covenant to pay rent such covenant must be performed. *The tenant's remedy is to ask the insurance company not to pay the insurance money to the landlord but to rebuild under the Act of George III. dealing with reinstatement.* The tenant would not be allowed to rebuild himself and then ask the insurance company to pay the bill, since the company is expressly described in the Act as the party who should carry out the reinstatement. *If the tenant fail to give an insurance company definite notice that he desires reinstatement and the sum insured is paid to the landlord then the tenant loses the benefit of reinstatement.* The landlord in such a case gets his rent or its equivalent twice over—once from the tenant and again in interest upon the sum insured. The law in Scotland is obviously the more equitable. By reason of this difference in the law of the two countries the tenant in Scotland has as a rule no insurable interest in the property of his landlord and does not need it; but the tenant in England has an insurable interest and needs it badly. It is, therefore, most important that a tenant in England should effect an insurance on his rent as well as on his furniture, and the insurance companies would do well to keep this fact even more prominently before the public than at present they do. In my ideal proposal form I should briefly explain the English

tenant's position and point out the desirability of an insurance on rent. That proposal form would be a valuable guide to the proposer.

EXEMPTIONS FROM INSURANCE PROTECTION.

This Policy does not cover—

- (a) Goods held in Trust or on Commission,
- (b) China, Glass, Jewels, Clocks, Watches, Trinkets, Gold or Silver Plate, Coins, Medals, Curiosities, Manuscripts, Engravings, Prints, Paintings, Drawings, Hand-made Lace, Tapestries, Sculptures, Musical, Mathematical, or Scientific Instruments,
- (c) Patterns, Models, Moulds, Designs,
- (d) Gunpowder, or other Explosives.
- (e) Deeds, Bonds, Bills of Exchange, Promissory Notes, Cheques, Money, Government Stamps, Securities for Money, Documents of Title to Goods, Contracts, Books of Account, or other Documents.
- (f) Loss or Damage to Property occasioned by or happening through its own Spontaneous Fermentation or Heating or its undergoing any process in or by which Fire-heat is applied thereto.
- (g) Loss or Damage occasioned by or happening through Earthquakes or Hurricanes, or any Invasion, Foreign Enemy, Hostilities, Riot, Civil Commotion, or Military or Usurped Power.
- (h) Loss by Theft during or after a Fire.
- (i) Loss or Damage by Explosion.

Unless specially mentioned in and expressly insured by the Policy.

Provided nevertheless that Loss or Damage to any of the Property insured by Explosion of Coal Gas in a Building not forming part of any Gas Works and not being a Building in which Gas of any kind is manufactured, or by Explosion of Domestic Boilers in Buildings occupied solely as Private Dwellings, or by being Struck by Lightning, whether the Property be set on Fire thereby or not, will be deemed to be Loss or Damage by Fire within the meaning of this Policy.

The detailed clause given above exempting certain objects such as china, glass, jewellery, gunpowder and so on from the protection of insurance and the exclusion of liability for spontaneous combustion, hostilities, riots and civil commotions, and for explosion except when specially allowed—as of gas and domestic boilers—is necessary though it may be much reduced. Unless some such conditions were contained in a policy an insurance company would be liable for the loss or damage of goods of every description and from loss by fire, however caused, other than by the wilful act of the insured. Such things as money, deeds, securities, jewellery and so on have been excluded from the benefits of ordinary fire insurance policies from early times. Most of them are proper subjects for insurance but they are too valuable to be included in an ordinary policy, and if insurance is desired it must be specially arranged for. There would too be a practical impossibility in determining the damage done unless “valued policies” upon them were issued.

The above clause has its limitations. For instance, if a fire was caused by an explosion of gunpowder then the insurance company would not be liable for the damage done. But if a fire broke out from some other cause and an explosion of gunpowder followed, then the clause would not free the company from liability. The exemption as regards Spontaneous Fermentation or Heating applies only to the property *itself* so damaged. If, for example, a stack in a rickyard heated and caused an outbreak

of fire which was communicated to the other stacks, the insurance policy would cover the damage to all the stacks *except the one which spontaneously heated*. In the same way if wool in a warehouse took fire from spontaneous combustion all damage done by the fire would be paid for with the exception of the wool which caused the trouble.

TRANSFER OF INTEREST.

The clause as regards transfer of interest is of the nature of a standard clause and is substantially the same in most insurance policies. It runs as follows:—

This policy ceases to be in force as to any of the property hereby insured upon the interest of the insured therein passing from him otherwise than by will or operation of law unless notice thereof be given to the company and the insurance be declared to be continued to a successor in interest by a memorandum made on the policy by or on behalf of the company, and the expression, "the insured," shall include a successor in interest to whom the insurance is so declared to be or is otherwise continued.

The substance of this condition is, I am informed, merely declaratory of common law since a fire insurance policy is a contract of personal indemnity. Its principal value is first as a notice or instruction to the insured and secondly as obviating the necessity of stamping an endorsement transferring the policy from the insured to his successor in interest.

In the New York Standard Policy the clause relating to interest is much more explicit, and runs as follows:—

This entire policy, unless otherwise provided by agreement endorsed hereon or added hereto, shall be void if the interest of the insured be other than unconditional and sole ownership; or if the subject of insurance be a building on ground not owned by the insured in fee simple; or if the subject of insurance be personal property and be or become encumbered by a chattel mortgage; or if with the knowledge of the insured foreclosure proceedings be commenced or notice given of sale of any property covered by this policy by virtue of any mortgage or trust deed; or if any change other than by the death of the insured take place in the interest, title or possession of the subject of insurance (except change of occupants without increase of hazard), whether by legal process or by judgment or by voluntary act of the insured, or otherwise, or if this policy be assigned before a loss.

It will be observed that interests, such as those of a mortgagee, life tenant, leaseholder and so on are ruled out under this sweeping clause, and the reason is the alleged moral hazard. If these interests were insurable as well as the interest of the owner a property might be insured by two or more different persons at many times its full value, each taking out a policy upon it for the full value. When the different interests require protection the American practice is to join them all together in one policy.

We have at present to consider not the American but the British practice and I have given the New York clause as a contrast to our own. Let us look into the question of interest. An insurable interest is essential for a valid insurance contract though a great many insurance contracts are effected without such interest. But not often in fire insurance. Buildings may be insured by the owner whether absolute or legal or by the tenant, and goods may be

insured by owners or by those who are responsible for their safe custody, such as carriers, innkeepers, pawnbrokers and so on. A creditor may insure both buildings and goods of a debtor over which he holds security, but an ordinary creditor has no insurable interest in the goods of his debtor. Thus, if I owe my tailor a little bill he has no insurable interest in my furniture, but if I give a bill of sale on my furniture then the holder of it can legally insure that furniture. The holder of a lien on property for money owing can insure. A mortgagor's interest is for the full value of the property mortgaged, and does not cease until all equities in his favour have been extinguished. Interest is not limited to beneficial interest, and a trustee can recover the full value of trust property which he has insured in his own name. *As the insurance contract is a personal one, and for loss sustained, the insured must have an insurable interest both at the time of the insurance and at the time of the loss.* This has been definitely laid down and follows naturally from the nature of the contract. It therefore follows that *fire policies are not assignable of right*, and the ordinary clause in the fire insurance policy simply declares this fact. A marine insurance policy is assignable of right, and it is due to their familiarity with this class of insurance that members of Lloyd's make their fire policy also assignable of right. It will have been noted in the form I gave that the insurance is to John Smith and "his assigns". As the protection of the insurance companies against assignments which they are not able to allow is

so complete at common law the clause relating to interest and assignments may be omitted. The necessity of restamping endorsements transferring the interest in the policy may be met by a simple line in the contract itself: "The company may by memorandum on the policy transfer or continue the same to any successor in interest of the insured and such successor shall thereupon become the insured within the meaning of this policy". The ordinary clause relating to transfer of interest omits to take cognisance of one rather important point. It does not provide for protection of a purchaser where an insured may have contracted to sell a building but where the sale has not been completed at the time of a fire. Here the purchaser under his contract of purchase is the real owner, but unless this were provided for the seller would be the owner within the terms of the policy. A new clause has been drafted to meet these circumstances running somewhat as follows:—

If at the time of the loss or damage to any building hereby insured the insured shall have contracted to sell his interest therein and the purchase shall not have been completed, the benefit of this policy so far as regards such building shall, for the period between the date of the contract of sale and the completion of the purchase, in the absence of any stipulation to the contrary, vest in the purchaser to whom, subject to these conditions, the company shall be accountable for any sum payable in respect of the loss or damage. Provided that the company shall not be liable to make any payment to the purchaser save to the extent to which he may not be otherwise insured, or in any event until the purchase is completed, and that if the purchase be not eventually completed the benefit of this policy shall, so far as the same may have vested in such purchaser, revert to the insured.

The pleasing feature of this clause is that it is drawn in the interest of an innocent third party, the purchaser, and provides against his suffering loss through a building being destroyed or damaged which he has contracted to purchase. So many conditions appear to be drawn chiefly in the interest of insurance companies that one always welcomes those which show a regard for the equally important interests of the public.

THE MAKING OF CLAIMS.

We now come to the clause which sets out the manner in which claims should be made and what constitutes the proof of a claim. As this clause was omitted altogether in a recent furniture policy issued by a tariff company, and caused much discussion, we may look into it rather closely. The clause at present in use is somewhat as follows:—

If any loss or damage by fire shall happen to any of the property hereby insured, the insured shall forthwith give notice thereof in writing to the company, and shall within thirty days at latest after such loss or damage, and at his own expense, deliver to the company a claim in writing for the loss or damage, stating the several amounts of the loss or damage in respect of all the several items of insurance respectively, and containing as particular an account as may be reasonably practicable of the several buildings, items of property, and things damaged or destroyed, with the estimated value of each of them respectively at the time of the loss or damage, and the amount of the damage to each, and also in case the insurance of the property damaged or destroyed is subject to average shall if required, at his own expense, deliver to the company an account of all other buildings, articles or items of property or things insured by this policy subject to such average,

with the estimated value of each of them respectively at the time of the loss or damage. The insured shall also produce and give to the company, when, where, and to whom, and in manner required by it, and at his own expense, all such plans, specifications, estimates, deeds, books of account, vouchers, invoices, copies thereof, documents, proofs, and explanations with respect to the claim, and the alleged loss or damage, and the circumstances of the loss or damage, and the ownership of, or interest in the property, hereby insured, and as to other insurances, and also as to all other matters as may be reasonably demanded; and no claim whatever under this policy shall be payable, unless the terms of this condition have been complied with.

Now what happens if this clause, or some corresponding one, is omitted. At common law the insured would not be bound to do any of the things which under the condition he may be required to do. In the absence also of an arbitration clause he could bring an action forthwith for the recovery of the amount of his loss. If an arbitration clause existed he could make a statement of his claim and insist upon going to arbitration upon it. Of course he would have to prove his claim sooner or later, but the manner and time within which he did it would rest with the court before which he went and not with the insurance company. Under a Lloyd's policy there is no such clause and no arbitration clause. Under the furniture policy referred to there was no clause relating to claims, but there was an arbitration clause. It seems to me that the omission of this clause does not seriously affect the position of insurance companies, since claims must be satisfactorily proved sooner or later, but it does affect the position of the insured. The omission leaves him altogether

without guidance and, in order to ascertain how he stood in regard to a claim, he would in any difficult case be practically obliged to present his claim through a solicitor. Some solicitors know a good deal about insurance matters, others know little or nothing; and it might well happen that in his efforts to collect a claim, where the manner of proof was not explicitly described, a claimant might run up a very handsome bill of costs. Those who take out Lloyd's policies effect them through an insurance broker; through them also claims are presented and there is little need for instruction. With the clear instructions given in the ordinary clause, and the further instructions which an insurance company would give in pursuance of that clause, no claimant need go to a solicitor except where claims fail to be settled by agreement and have to be submitted to arbitration. You cannot in insurance matters give too much help and instruction to the insured, since most of the members of the public are completely ignorant of insurance; but unless you have a clause which empowers you to give instructions the claimant need take no notice of you. I cannot but think that the omission altogether of a claim clause must increase the difficulties of settlement and prove no benefit whatever to the public. But at the same time it may well be contended that the clause given above is too severe. It is rather too explicit and asks for too much. It asks for "estimates, deeds, books of account, vouchers, invoices, copies thereof, documents, proofs and explanations". All these things are reasonable

enough in the case of a merchant's stock of which in the ordinary course of business he keeps the fullest particulars. But is it reasonable in the case of domestic furniture? Many of my readers have some acquaintance with fire insurance, and those who are householders will have insured their furniture, but which of them could off-hand supply books of account, vouchers and invoices showing the value of the property lost or damaged? I admit candidly that I could not—and which of my readers could? It has now been agreed by all the tariff offices to require the presentation of a claim within thirty days of a fire with reasonable particulars of the damage done.

A modern edition of the clause runs: "On the happening of any loss or damage the insured shall forthwith give notice thereof in writing to the company, and shall within thirty days after such loss or damage or such further time as the company shall allow, deliver to the company a claim in writing for the loss or damage, containing as particular account as may be reasonably practicable of the several articles or items of property damaged or destroyed and of the amount of loss or damage thereto respectively. The insured shall also give to the company all such proofs and information as may reasonably be required. No claim under this policy shall be payable unless the terms of this condition are complied with." The governing word is here "reasonable," and the absence of an express demand for documents, invoices, etc., leaves it to be determined in each individual case as to what proof is reasonable. This revised clause

would appear to leave little to be desired; it is a sufficient direction to the insured and requires only reasonable proof of loss or damage.

FRAUDULENT CLAIMS.

The accompanying clause relating to the fraudulent presentation of claims is most important and I do not see how it can be safely omitted. The moral hazard must be guarded against and here the common law is little or no protection. While under common law misrepresentation in a proposal form—that is, at the initiation of a fire insurance contract—vitiates a policy either with or without return of premium, according to circumstances, yet the *fraudulent making of a claim would not disentitle a claimant from recovering the amount of his true loss.* He could not recover the amount he fraudulently claimed, but his title to the true amount would remain unaffected. The clause which bars any one who makes a fraudulent claim from recovering at all therefore much strengthens the common law position. The old clause by which this end was achieved was:—

If the claim or any plan, specification, estimate, deed, book, account, entry, voucher, invoice, or other document, proof or explanation produced or given be fraudulent or false, or if any fraudulent means or devices are used by the insured, or any one acting on his behalf, to obtain any benefit under this policy, or if the fire be occasioned by the wilful act, or with the connivance of the insured, all benefit under this policy shall be forfeited.

A new one which I have seen is equally effective though shorter. It runs: "If the claim be in any

respect fraudulent, or if any fraudulent devices are used by the insured, or by any one acting on his behalf, to obtain any benefit under this policy, all benefit under it shall be forfeited". Some words to this effect are distinctly in the public interest and a proper protection of insurance companies and of honest policy holders. If a man starts off by making a fraudulent claim how can one have any faith in his real claim? Under common law a company would be obliged to pay the amount of a real loss whatever fraudulent devices had been used, and it would be little satisfaction to put the claimant in prison for attempting to obtain money under false pretences. The principle of the clause has been accepted by all the tariff offices.

REINSTATEMENT.

The subject of reinstatement, that is, the power of insurance companies to expend the sum insured in rebuilding or replacing property as far as that money will go, is a thorny one and is the subject of much diversity of opinion. I referred to this subject in my first chapter, and mentioned that under two Acts of George III. and one of Victoria power was given to insurance companies to reinstate buildings, not goods. They have no statutory power to reinstate goods. The Acts were passed "in order to deter and hinder ill-minded persons from wilfully setting their house or houses or other buildings on fire with a view of gaining

for themselves the insurance money," and they give the insurance companies power to elect to reinstate, and also they authorise "any person or persons interested in or entitled to any house or houses or other buildings" to request the insurance company to reinstate and, if the request is made, then the insurance companies are "authorised and required" to reinstate. That is a reasonable power both to the insurance companies and persons interested in buildings destroyed or damaged by fire. I showed just now how it operated as a protection to a tenant. But in practice the companies have gone much beyond the powers conferred upon them by statute, and have claimed the right to reinstate goods as well as buildings. The public, while they have power to demand the reinstatement of buildings, have no corresponding power to compel the reinstatement of goods. The rights of insurance companies and of the public have under the policy conditions become rather one-sided. It may be contended whether the companies ought not in practice to abandon their powers of reinstatement, though they cannot, of course, refuse to reinstate buildings if called upon to do so in terms of the statutes. But reinstatement by insurance companies may often be harsh and unfair. For example, how many people, even when their houses are fully insured, want them rebuilt under the same conditions practically as before existed. They would often like a new house on a different site, say in the suburbs instead of in a business quarter, yet if a company elects to reinstate it may rebuild the house in an unsympathetic

wooden-headed way on the old site. Take another case. Suppose a house to be not insured for a sum which will fully replace it—for one must remember that the cost of building and materials has advanced very much of recent years—and suppose, moreover, that local building regulations do not allow the house to be rebuilt on the same site and that it has to be set back from a road making a much smaller ground area. Is the company to rebuild on the new smaller site and to expend the insurance money as far as it will go in reinstating so that the claimant comes in for a house which he does not want, and with, very likely, the roof unfinished because the insurance money has run out? I must say that such a reinstatement would be monstrous and a travesty of insurance. If a building is so far burnt as to be beyond repair and to necessitate rebuilding, let a company pay the owner or insured the value of his property and permit him to rebuild where he likes, or not rebuild at all if he likes. I recite below a clause as regards reinstatement. With respect to buildings it does little more than define the rights given by statute, though it fills up gaps in these powers. As regards the reinstatement of goods the powers do not exist at law and are conveyed only by the policy condition. There is a movement on foot—it may not be widely extended but it is certainly influential—to omit the reinstatement clause altogether. A company would then retain its statutory powers to elect to reinstate buildings if the circumstances of a case seem to require it—where there

was suspicion of fraud, for instance—and would have no power to reinstate goods at all. If called upon to reinstate buildings by persons interested it would be bound, as now, to do so.

The company, at any time before payment of the amount of any loss or damage, whether or not the amount of the loss or damage has been adjusted or ascertained, or an award has been made, may, instead of paying the amount of the loss or damage, elect to make it good by replacing or reinstating the whole of the property damaged or destroyed, or by replacing or reinstating any items or parts thereof and paying the amount of the loss or damage to the residue of such property: provided that in the event of the company being prevented by any building regulations, or otherwise by law, from reinstating any building as it was before the loss or damage thereto, the company shall be bound only to reinstate the same as far as practicable, and shall not be bound to expend more than the sum it would have cost to reinstate such building as it was before such loss or damage; and provided also that the company shall not in any case be bound to expend in respect of any one of the items insured more than the sum insured by the company thereon.

THE CUSTODY OF DAMAGED PROPERTY.

A third clause relating to the making and payment of claims—the other two being the notice and proof of claim and the power of reinstatement—is the one dealing with the right of an insurance company to enter upon and take possession of property or buildings damaged by fire. This is a most important clause since it gives powers which do not exist at common law at all. A familiar form of the clause is :—

If any loss or damage shall happen in respect of which a claim is or may be made under this policy, the company, and every person authorised by the company, may enter, take, and keep possession

of the building or premises where the loss or damage has happened, and may take possession of or require any property of the insured on the premises at the time the loss or damage shall happen to be delivered to them, and may examine, sort, sift, arrange, remove and keep possession of such property until the claim is adjusted or settled without thereby incurring any liability, and this condition shall be evidence of the authority of the company, and of the licence of the insured so to do. If the insured or any one acting on his behalf shall not comply with the requirements of the company, or shall hinder or obstruct the company in doing any of the above-mentioned acts, or shall remove any property from any building or place mentioned in the policy contrary to the expressed desire of the company or any agent of the company, then all benefit under this policy shall be forfeited.

It will be seen that under this clause the insured hands over to the insurance company practically complete control over the property or buildings which are the subject of a claim. An insurance company under a contract from which this clause was omitted could not enter premises or touch any goods without express permission, and if it did so it might be treated as a trespasser.

The company which issued the furniture policy already referred to omitted the clause, but I cannot find any one of position in fire insurance circles who approves of the omission, and it has been agreed to retain its principle. Unless a company has some power over the property which is the subject of a claim, how is a fraudulent or litigious claimant to be dealt with? There are people who would demand their policy money and give no assistance towards a proof of claim. No doubt in the long run

people of that kind could be dealt with, but consider the bother and the possibilities of disputes reaching arbitration, a thing which every company with a reputation for ready and equitable settlements seeks to avoid. Under marine insurance policies ships or cargoes which are the subject of claims are either abandoned to the underwriters, who then make the best they can of them, or else the owner and underwriters agree together to salve property and assess the loss. I do not see how any reasonable objection can be made to the ordinary clause giving right of entry and possession, and there is practically no prospect of its being omitted. It might be abbreviated somewhat as follows: "The company may at any time after the loss or damage has been notified enter upon the premises and take and keep possession of the same, and examine, sift, arrange and otherwise deal with the goods insured and all débris upon the premises, for all reasonable purposes, and if the insured, or any one acting on his behalf, shall prevent the company from so doing all benefit under this policy shall be forfeited". Of course the provocation would need to be very great to justify a company in actually voiding a policy under this clause, but some powerful means of compelling litigious or fraudulent people to give a company free access and control over damaged property is essential. It is entirely in the interest of the honest and honourable policy holder that the substance of the clause should be retained.

CONTRIBUTION TOWARDS LOSSES.

If at the time any loss or damage shall happen to any property hereby insured there shall be any other insurance or insurances against loss or damage by fire effected or continued by the insured, or by any other person or persons on his behalf, covering the same property, or any part thereof—either exclusively or together with any other property—and whether made prior or subsequent to the date of this policy, this company shall not be liable to pay or contribute more than its ratable proportion of such loss or damage, and if any such other insurance or insurances on any of the property hereby insured shall be subject to average, the insurance on such property under this policy shall be subject to average in like manner, and in ascertaining the liability of this company this condition shall be taken into account.

The above "Contribution Clause" deals with the cases where there are two or more insurances on a risk and the contribution of each policy or company has to be determined. The clause affects the relations of companies to one another more than the insuring public, since it matters little to the insured who pays for the damage done so long as it is paid for. In practice the company with the largest amount at risk—or the senior company when amounts are equal—takes the settlement and arranges the *pro rata* contributions of other offices. If a policy did not contain a contribution clause in some form the insured could at common law recover up to the sum insured on any policy and leave the company concerned to obtain contributions from other offices. The terms of one policy could not affect the construction of another. No doubt the final result would be much the same were the contribution clause inserted or not, but its

inclusion is a great administrative convenience and leads to the simplification of settlements. It frequently happens that when several policies have been effected on a risk the terms and conditions are not identical, but the desire for speedy settlement causes any difficulties to be smoothed away, and it is rare for any real trouble to arise through divergence of terms. At the same time it would be an immense practical boon if all the principal fire insurance companies used identical policies for the same classes of risk, and the present movement towards uniformity of policy conditions will be of great service if this uniformity is ultimately achieved.

CO-OPERATION BETWEEN THE INSURED AND THE INSURANCE COMPANY.

The insured and any claimant under this policy shall at the expense of the company do and concur in doing, and permit to be done all such acts and things as may be necessary or reasonably required by the company for the purpose of enforcing any rights and remedies, or of obtaining relief or indemnity from other parties to which the company shall be or would become entitled or subrogated upon its paying for or making good any loss or damage under this policy whether such acts and things shall be or become necessary or required before or after his indemnification by the company.

The clause requiring the co-operation and assistance of the insured and any claimant is to a large extent declaratory of common law. It strengthens, however, the position of an insurance company. At common law if the company brought or paid into court the amount claimed it could compel the insured and any

claimant to do the things required by the clause but not until after payment. Under the clause the insured must do these things before payment and to this extent the ordinary legal position is strengthened.

WARRANTIES.

Most of the fire tariffs contain "warranties" which must be observed by the insured in order to receive certain concessions in premiums. But the tariffs are drawn rather loosely, and it is essential to lay down the condition that the warranties must continue in force during the currency of policies. At common law a warranty, if complied with when an insurance was effected, could not be a continuing warranty unless so clearly worded as to show that such was the intention. In order to make the necessity of continuance clear the following clause is added to the conditions of most fire insurance policies:—

Any warranties to which the property insured, or any item thereof, is or may at any time be made subject, shall attach and continue to be in force during the whole of the currency of the policy; and non-compliance at any time with any of the warranties shall be a bar to any claim in respect of such property or item.

I append below a print of the "Unconditional" furniture policy issued by an important insurance company during 1903, and given up by agreement with the other tariff offices as from 1st March, 1904. The reader will find its inclusions and omissions instructive in view of the points discussed in Chapters III and IV.

“UNCONDITIONAL” FURNITURE POLICY.

Present Premium £..... Annual Premium payable at..... £.....

This Policy of Insurance witnesseth THAT

(hereinafter called the Insured) having paid to the (hereinafter called the Company,) the sum of for Insuring against loss or damage by Fire, as hereinafter mentioned, the following Property namely:—

Household and Personal Property of every description (excepting money, bullion, deeds, evidences of debt and securities), the property of the Insured, or of Members of his Family, Servants and Visitors, while contained in the private dwelling house situated.....
no one Curio, Picture or other Work of Art in case of loss to be valued at more than five per cent. of the amount hereby insured.

In the event of any of the above-mentioned Property being temporarily removed to any other private dwelling house, hotel, lodging house, bank or laundry in Great Britain, the Property so removed shall be deemed to be specifically insured in any one such place for ten per cent. of this Insurance provided no other Insurance applies thereto.

The Company hereby agrees with the Insured that if the Property so described, or any part thereof, shall be destroyed or damaged by Fire, including explosion of gas and domestic boilers, or by lightning, at any time between the 190 and four o'clock in the afternoon of the 190 or at any time afterwards, so long as the Insured or the Representatives of the Insured, being successors in interest, shall pay to the Company and it shall accept the sum required for the renewal of this Policy, on or before four o'clock in the afternoon of the last-mentioned day and on or before the same day in each succeeding year, the Company will pay or make good all such loss or damage to an amount not exceeding in the whole the sum of pounds.

Provided always that if at the time of any damage there be any other Insurance in favour of the Insured on the same Property or any part thereof the Company shall not be liable for more than its ratable proportion of the loss.

Provided also that if any difference shall arise between the Company and the Insured it shall be referred to arbitration as a reference by consent out of Court under the Arbitration Act, 1889, or any amendment thereof.

Provided lastly and it is hereby expressly agreed and declared, and the true intent and meaning hereof is, that the Capital Stock and Fire Funds of the said shall alone be answerable under this Policy; and that no Holder or Holders of any share or shares in the said Capital Stock shall be liable beyond his or their share or shares thereof, anything contained in this Policy to the contrary notwithstanding.

Countersigned by

General Manager.

CHAPTER V.

DISPUTES AND ARBITRATION.

ALTHOUGH the stringency of fire policy conditions is often relaxed in practice where an insistence upon them would do less than justice to the insured and lead to disputes, these conditions should nevertheless be regarded most seriously by policy holders. Their binding character is beyond doubt, and in order to show how a condition which had become unreasonable was still maintained by the courts I would refer the reader to the case of “Wood and Others *v.* Worsley” in 1795.

In this case a Phoenix policy provided that in the event of a fire “persons insured should give notice of the loss forthwith, deliver an account, and procure a certificate of the minister, churchwardens and some reputable householders of the parish, importing that they knew the character, etc., of the assured and believed that he really sustained the loss and without fraud”. The minister and churchwardens refused to sign the certificate and the plaintiffs alleged that the refusal was wrongful and unjust.

The jury found that the minister and churchwardens did wrongfully refuse to sign, gave a verdict for the plaintiffs and negatived fraud.

Now comes the point. On a motion for a new trial the judges were divided in opinion, and on an appeal in error to the King's Bench the judgment was reversed and the court held that the production of the certificate laid down in the policy was a condition precedent and that it was immaterial that the minister and churchwardens refused to sign it. The document must be forthcoming or the evidence in support of the claim was incomplete.

That decision was no doubt good in law as it has stood ever since, but it will strike an ordinary layman as flagrantly unjust. In fact any fire insurance company which nowadays interpreted its conditions in such a spirit would very properly deserve to be pilloried and to find public support withdrawn from it. But the fact that in law the policy conditions are binding in the strictest sense makes it all the more important that they should be framed in a manner which shall be just both to the insurance companies and to the insured.

The above condition about the certificate of minister and churchwardens has long since been abandoned, and a case occurred in 1844 which showed that the fire offices had learned the undesirability of enforcing it. In that year a man named Nash, insured with the Sun Office, could not obtain such a certificate, and much discussion arose in the press on account of the hardship the condition imposed on Dissenters. The Sun rose to the equity of the matter and announced in November, 1844, that the certificate of minister and churchwardens which

had rarely been required would in future be dispensed with altogether, and that policy holders could have their policies endorsed accordingly. By abandoning the requirement the Sun allowed the claim of Nash to be proceeded with and he obtained a verdict for a small part of his alleged loss. I think that every one will agree that the Sun Fire Office in this matter showed a very fair spirit. The same spirit still inspires the managers and directors of fire insurance companies, but the liberality of insurance offices does not release the public from the necessity of studying and understanding the contracts of insurance which they effect.

DETERMINATION OF LOSS.

No subject in fire insurance is more important than that of the determination of losses by fire and the avoidance of serious disputes. A company desires to pay the exact loss or damage done, no more and no less. It does not desire to get the better of the insured. Some people have written of fire insurance as if the companies had for one of their main objects the "doing" or "besting" of the insured. But no one who has any acquaintance with the business accepts this view for one moment. The boot is on the other leg. If anything, the companies, in their desire to avoid disputes and to keep their good character with the public, pay claims in excess of those strictly due, and it may be contended by doing so they encourage extortion and, possibly, incendiarism. For it is just as much their duty to protect

the careful honest insured from having to pay for the dishonest ones as it is to indemnify fully those who suffer from loss. The difficulty is to hold the balance true.

Let us devote our attention to the assessment and settlement of losses and to the important subject of disputes and their reference to arbitration.

After a loss or damage has been notified and the representative of a company has proceeded to the spot, his first duty is to take every possible step to prevent further loss. It is also the duty of the persons insured to take similar precautions in their power. When this has been done the cause of the fire should immediately be ascertained. It may have originated from design, carelessness, or by spontaneous combustion or an explosion outside the protection of the policy. Any suspicious circumstances have to be looked into discreetly and cautiously but without delay, for even a Sherlock Holmes could not do much if the traces of incendiarism had been covered up. The important thing is to get a report from the first person who was upon the ground as to what he saw. The possibility of fraud is always present, and some light may be thrown upon a doubtful case by ascertaining whether a building was occupied or vacant at the time of a fire, whether it was profitable to the owner or tenant, whether it was for sale or subject to litigation, whether mortgaged or about to be, if mortgaged whether subject to present or pending foreclosure, and so on. The fact to be determined is whether the insured stood to gain by

the occurrence of the fire. A chronic suspicion of everybody is almost as foolish as a chronic belief in the honesty of all one's fellow-creatures, and rather more dangerous and misleading, but the eyes should never be blind to the existence of unscrupulous persons. It is most important to ascertain if the insured has suffered from a fire before, when and where, whether insured at the time and, if so, with what offices. After attention has been directed to the moral aspects of the case one has to regard the material loss. Although under the ordinary policy conditions the companies have control over the damaged objects or those salved, yet their possession remains with the insured. The insured cannot divest himself of his property and abandon it to the insurance companies as in marine insurance a ship is abandoned to the underwriters. The fire policy being one of indemnity only the companies are liable only for loss actually sustained. The manner of an assessment must depend on the circumstances of each individual case, and so many technical matters have to be considered and determined that no insurance official, however competent, can expect to take the place of professional assessors.

ASSESSMENT.

There are many firms of assessors employed by insurance companies, and to them has to be left most of the details of adjustment. In mercantile cases where both sides employ assessors of standing there is no great difficulty as a rule in speedily arriving at

a settlement, especially if the books of account and other documents have been preserved from the fire. But there are such things as litigious and cantankerous claimants, and there are inferior assessors or "claim makers," and it is these people who give the trouble. While an assessment is proceeding quietly the insurance manager leaves it alone and he is not called upon for much interference unless a dispute arises which cannot be adjusted by the assessor. The duty of minor officials or agents is principally negative. They must say or do nothing which would in the smallest degree prejudice their company in arriving at a settlement. Any divergence from the letter of the contract must be left to the chief officer and the directors of the company. No branch office should enter upon correspondence on legal or delicate points connected with a claim, and no sort of arbitration, formal or informal, should be initiated without the express authority of the head office. The principle of the apportionment of loss under policies issued in divergent terms with other companies should not be discussed until the head office has had full particulars for consideration. In practice, where there are several insurances on a property under policies granted by different companies, the office with the largest financial interest arranges the settlement and the others follow and pay their respective *quota* under the usual contribution clause. It rarely happens that any difficulty arises through divergent terms or conditions in policies, since the companies concerned all agree to follow the settlement of the

“leading office” on the risk. In the first instance the business of arriving at a settlement lies with the assessors appointed by the company and the insured, and the duty of all officials of the company is to stand outside the ring and hold the ropes while this settlement is proceeding. This non-interference is essential if disputes are to be avoided. Given an assessor with knowledge and tact, especially tact, and a manager who interferes with him as little as possible, and the material for most disputes is removed. As a matter of fact serious disputes which go so far as to be referred formally to arbitration are very rare considering the enormous annual number of settlements. A dispute is almost always traceable to the lack of a really skilful assessor or to some blunder in tact or management at the beginning which set the insured’s back up. In a well-known case which has been circulated widely for some years past I must confess to some sympathy with the claimant. His claim may have been excessive, it probably was, but it is clear that the original assessment was most unsatisfactory, and that a little tact would probably have prevented the whole dispute. This is indeed freely admitted by most insurance men of position, and would probably be admitted privately by the company which was involved in the dispute. But it is not very sound logic to base a general principle on an isolated case, and though it must be admitted that there exists one example at least in which the assessment of a loss was badly managed and a dispute arose which has done harm to fire insurance companies, it

should also be pointed out how rare such mismanagement and such disputes really are.

THE RARITY OF SERIOUS DISPUTES.

I have before me some notes drawn up by the head of one of the leading firms of fire assessors in London. The chief of that firm was asked to say if he found the introduction into fire insurance policies of a compulsory arbitration clause work adversely to the insured. He says that during the last thirty-five years he has been incessantly engaged in settling fire losses, and that there is not a fire office of old standing for which he has not acted. Owing to deaths and retirements the constitution of his firm has from time to time changed, but the books of the one of which he is the senior partner goes back about six years, and he will confine himself to that period as the question is insurance business of the present day, or say since the Arbitration Act of 1889. He could, however, by turning up old books go back for thirty-five years, but that would have the same bearing in proving the fairness and utility of the arbitration condition. During the whole of the six years referred to, in which his firm has settled thousands of claims, only one has gone to arbitration, and the result of this arbitration was that the learned counsel of the highest standing who adjudicated upon it found that the policy had been vitiated, and that there was consequently no liability under it, and further ordered that the claimant should

pay the insurance company's costs as well as his own. This assessor states further that he had occasion to write recently to one of the principal companies as follows :—

“ Looking through our schedules of cases, and we have gone back to the year 1867, and during this long period we have traced, out of the thousands of losses which you have entrusted into our hands for settlement, only one that has gone to arbitration. In this solitary case a learned and legal arbitrator, who is now one of His Majesty's judges, made an award that there was no money due under your policy, and that all the costs attending upon the proceedings were to be paid by the claimant. This speaks for itself as to the justification of the position you took up.”

Mr. ——'s report continues : “ Cases of compensation for fire losses almost invariably involve immense detail and voluminous and complicated figures, which it would be impossible to have fairly adjusted by a jury, and it is his experience that frequently where such cases are brought before a judge he orders it to be referred. Many of the cases would occupy a jury for weeks. Arbitration is generally provided for not only in matters of ordinary valuations, but in nearly all mercantile contracts where questions of accounts are involved. In cases where he has not acted as assessor for the fire offices it has occasionally been his duty to act as an arbitrator, and it is his invariable practice to insist upon a barrister being appointed either by the arbitrators or the court to act as umpire

and preside at all meetings. Not only in such cases but also in others which have come to his personal knowledge the action of the offices has been almost universally justified by the awards. If all assessors were consulted it would be ascertained that seeing the very large number of fire claims daily settled by the offices, it is surprising that arbitrations are so few and far between."

The report of this assessor is confirmed by many others, and evidence of the kind is of value from its impartial character. It matters little to assessors—so far as their business is concerned—whether disputes which cannot otherwise be adjusted go to arbitration or before the ordinary law courts. The assistance of assessors would be just as necessary to the fire offices and to the public if the reference to arbitration in the ordinary fire policy were abolished.

ARBITRATION, FORMAL AND INFORMAL.

There are three things we have to consider with reference to the question of arbitration in fire insurance disputes. First, what would happen if there were no arbitration clause; secondly, what has been and what is the practice of insurance companies with regard to arbitration; and thirdly, what is likely to be their practice in future. As a preliminary step I must draw attention to the distinction between informal and formal arbitration. An informal arbitration or appraisement needs no policy clause and has often been made use of both in this

country and in the United States. Where, say, the extent of damage done to a building cannot be agreed upon between the company's assessor and the insured, or his adviser, then the parties may agree to submit the question to an independent appraiser and abide by his decision. The duties of such appraiser or appraisers end with the determination of the sound value of property and the amount of the damage done. Appraisers are not arbitrators—that is why I have used the different word—they have nothing whatever to do with the liability of a company but only with the amount of damage or loss incurred. Such an appraisement can only take place when both parties agree to it, but it often is a convenient half-way house between a direct settlement and a formal and, of course, rather costly reference to legal arbitration.

THE OMISSION OF AN ARBITRATION CLAUSE.

Now what would happen if fire insurance companies' policies contained no arbitration clause? At common law the insured would be entitled to bring an action at once after a loss. Let us consider what would then happen, and we shall be assisted by looking at the practical results which attend the omission of an arbitration clause from marine insurance contracts. In marine insurance it rarely happens that cases which turn on the amount of damage or loss sustained through a casualty go before a jury. They are determined by surveyors and "average

adjusters" employed by the parties interested. The law courts frequently have to decide questions of legal liability, but the amount of the damage or loss in dispute is usually arranged previously and agreed to by both sides. An ordinary law court is a most unsuitable place for determining complicated questions of damage and account, and if fire insurance contracts went before the ordinary courts the chances are that the judge would either refer the case to referees or arbitrators for hearing on matters of fact or sit with assessors and no jury. In marine cases, like damage done by collisions, or actions for the determination of salvage services, the Admiralty Court is provided with professional assessors who sit with the judge to assist him. In practice most questions *of fact* in marine insurance are settled out of court by professional advisers similar to fire insurance assessors and arbitration is becoming of common use. For example, when a vessel is ashore and a salvage contract has to be made with a firm which does this class of business, it is a common practice of the London Salvage Association, which represents the underwriters, to make a contract on a "no cure, no pay" basis with remuneration to be settled by arbitration. There are other sorts of contracts but this is a common one. I do not myself think that if the arbitration clause was omitted altogether from fire policies that there would be much litigation or that one case in ten thousand would go before a jury. The courts would, in all probability, exercise their powers to submit disputes for inquiry

and report to an official or special referee. Under the Arbitration Act of 1889 the report of an official or special referee may be adopted wholly or partially by the court or judge, and, if so adopted, may be enforced as a judgment or order of the court to the same effect. Looking at the matter from the point of view of the insured I do not see that they would have anything to gain by the omission of an arbitration clause, and they might lose much through the costs of hasty actions which they might be tempted to bring. So far as actual money is concerned I do not, moreover, think that the fire insurance companies would lose anything by ceasing to insist on arbitration, but they might suffer indirectly. Numerous actions against them, however frivolous or unsuccessful on the part of the claimants, might give the public an idea that claims were frequently disputed. This is a possible argument against the omission of an arbitration clause but I do not myself see much in it. There is no arbitration clause in marine or in life insurance policies, and we see in practice that actions of a frivolous or unnecessary kind rarely arise. The actions which take place are usually to determine legal liability. After all, the litigious or cantankerous claimant is happily rare; most people want to get their insurance settlements completed with the minimum of bother or expense. In some of the policies issued in the United States there is a reference to arbitration, but the insurance companies there have not a free hand in framing their policy contracts. The insurance departments of the various



states have a good deal to say, and in some states the insurance commissioners draw up the form of fire policy themselves.

FIRE INSURANCE COMPANIES AND ARBITRATION.

Now let us look into the practice of insurance companies in regard to this matter of arbitration. It is rather an interesting fact that though the Arbitration Act dates from 1889 only, yet fire insurance companies have from the earliest times provided arbitration as a means of determining differences with their insured. In the deed of settlement of the Union Fire Office, dated 1715, appears the following clause :—

It will sometimes happen that questions, disputes, difficulties and controversies will arise. Most reasonable to submit same to some society or body of fit or indifferent men who may have or be presumed to have perpetual succession; and forasmuch as the directors of the Amicable Contributionship or Hand-in-Hand Fire Office are yearly made up and constituted of able citizens and other persons who may be justly supposed to be not only indifferent and disinterested persons, but well skilled in all matters of this nature, and who by their generous action in said directorship without fee or reward may well be presumed to be proper judges, it is expressly provided that all questions, etc., shall be referred to the directors of the Hand-in-Hand Fire Office or the major part of them who were not directors of the Union.

The decision of the directors of the Hand-in-Hand was final. It will be remembered that the Union was allied to the Hand-in-Hand; the former insuring goods only and the latter buildings only.

The proposals of the Royal Exchange Assurance Corporation, dated 1721, provided that "in case any

difference arise between this Corporation and any assured about the proof of a loss, that then the same shall be submitted and referred to the judgment and determination of arbitrators indifferently chosen, whose award in writing shall be conclusive and binding to all parties". The Sun Fire Office in 1727 had an almost identical clause, and it is clear that the submission of *matters of fact* to arbitration was at that early period a part of the general practice of such fire insurance companies as existed. The arbitrators who had to be appointed under these stipulations had nothing to do with the legal liability of insurance companies but only with the amounts of loss or damage in dispute.

As far as I have been able to ascertain, the reference of the *legal liability* of insurance companies for loss or damage from fire was not included in the arbitration clause of any fire insurance company until after 1870, when an attempt was made to adopt uniform conditions in all policies emanating from tariff offices. The standard clause, which has been adopted since the Arbitration Act of 1889 was passed, runs substantially as follows and is most comprehensive:—

If and whenever any difference or differences shall arise between the insured or any claimant under this policy and the company as to any claim for any loss or damage or as to any matter touching the rights, duties and liabilities of the insured or the company, in any way relating to or arising out of this policy, such difference or differences shall be referred to the decision of an arbitrator, to be appointed by the parties in difference, or if they cannot agree upon a single arbitrator, to the decision of two arbitrators, of whom

one shall be appointed by each of the parties in writing within one calendar month after either party has been required so to do by the other party; and in case of disagreement between the arbitrators, to the decision of an umpire, to be appointed in writing by the two arbitrators before entering upon the reference, who shall sit with the arbitrators and preside at their meetings during the reference, unless the arbitrators shall otherwise agree in writing, and the death of any of the parties shall not revoke or affect the authority or powers of the arbitrator, arbitrators or umpire respectively. And the arbitrator, arbitrators or umpire, at the request of either party, shall state the facts upon any question of law in a special case for the opinion of the court, and shall have power to make one or more awards as to any of the matters in difference respectively at their or his discretion; and the costs (but only as between party and party) of the reference and the costs of the award shall be in the discretion of the arbitrator, arbitrators or umpire making the award, who shall have power to determine the amount of the costs of the reference and award respectively, or any part thereof, or to direct the same to be taxed and to direct when and by whom and to whom and in what manner such costs or any part thereof shall be paid. And the submission to arbitration shall in all other respects be subject to the provisions of the Arbitration Act, 1889, or any statutory modification thereof. And the company shall not be liable in respect of any claim for any loss or damage, or for any act, neglect or default in the exercise of any of the powers and authorities given to it by the policy, unless and until the liability of the company and the amount of its liability in respect of the claim shall, if not admitted, have been referred to and determined by such arbitrator, arbitrators or umpire, whose award thereon shall be a condition precedent to any liability of the company or any right of action against the company in respect of such claim. And the company shall not be liable in respect of any such claim after the expiration of one year after the happening of the loss or damage, or other event in respect of which the claim is made, unless such claim shall in the meantime have been referred to arbitration.

There are several important points about this clause. *It is a complete reference as to fact without any*

appeal. It is also a reference as to the legal liability of both parties subject to appeal, for the reader will observe that "the arbitrator, arbitrators or umpire, at the request of either party, shall state the facts upon any question of law in a special case for the opinion of the court". It is, therefore, a final tribunal only as regards fact. Then the arbitrators must be appointed within one month after either party has been required to do so by the other party, and if a year passes without reference to arbitration then the liability of a company for a claim is at an end. These last two time clauses are designed to prevent claims from hanging about indefinitely as otherwise they might do, and as in marine insurance they often do. As they allow ample time there is little hardship in them.

In practice this clause has not worked badly and the testimony of assessors is unanimous as to the infrequent occasion for its exercise at all.

It has been urged that the blot on the arbitration tribunal is its secrecy, and that the insistence by fire offices on an arbitration clause shuts claimants out of the public courts. Arbitration courts are not only recognised by law but, under the Arbitration Act of 1889, they are directly encouraged by the legislature. There is nothing really secret about a case heard before arbitrators. It is true that newspaper reporters would not be admitted to a fire insurance arbitration unless both parties wished them to come, but neither would newspaper reporters be likely to attend a fire insurance claim

case if it was heard in the ordinary courts before a jury. There is as a rule no public interest in personal disputes of fire damage. Unless there were something altogether exceptional about an insurance case—unless there were suspicion of fraud or some point of law was involved—no newspaper would take any notice of it. Any claimant against a fire insurance company, which insists on arbitration and dislikes secrecy, can take a note of the arbitration proceedings and send it to the papers if he likes, but as one who knows something of newspapers I may say that it would have to be an unusually interesting case for any notice to be taken of it even then. Fraudulent practices and points of law are always of interest, and when either of these things is produced at an arbitration the criminal courts are open to the hearing of the first and the ordinary law courts are open for an appeal as to the second.

THE FUTURE OF THE ARBITRATION CLAUSE.

While there appears no prospect whatever of an arbitration clause in fire insurance policies being abandoned by the companies, and they have in fact agreed to retain it—there is no such clause in the Lloyd's policy—it is probable that it will be much simplified. The Arbitration Act of 1889 supplies all the necessary machinery for conducting arbitrations, and it would seem that a short clause compulsorily submitting disputes to arbitration would be sufficient. In the furniture policy given on page 113 the arbitration clause ran:—

Provided also that if any difference shall arise between the company and the insured it shall be referred to arbitration as a reference by consent out of court under the Arbitration Act, 1889, or any amendment thereof.

I do not think that any serious objection can be made to this clause though it would be perhaps better if words were added somewhat as follows : " Unless and until an award has been made the company shall not be liable for any loss or damage ". The question of the costs of arbitration proceedings is receiving attention. My readers are perhaps aware that under the Arbitration Act an arbitrator has no power to award costs if the submission does not authorise him to do so or if the costs are to abide the event of the award ; but such power is included in the submission unless expressly excluded. If the submission gives the arbitrator a discretion as to costs he may order either party to pay them or each to pay half, or otherwise, as in his discretion appears just ; he may even direct the successful party to pay them. If he award costs generally to either party they may be taxed without any express direction to that effect. In the standard arbitration clause given above costs are left to the discretion of the arbitrator. It is felt, however, by some fire insurance authorities that as companies are very wealthy and powerful in comparison with private claimants they should pay their own costs in any event and leave the claimant's costs to the discretion of the arbitrator. This concession as to costs is embodied in the following arbitration clause which has already been made by

one leading company, and should convince the public that an insurance company wishes to give policy holders rather more than their strict legal due, and by penalising itself in costs, in any event, will not have recourse to arbitration if it can possibly be avoided. It is desirable, however, that if such a concession is made it should be agreed to by all the tariff companies and not be inserted in some companies' policies and omitted from others. For if a difference were referred to arbitration and several policies had been effected it would be an awkward thing if, under some of them, the companies paid their own costs and under others left the question of costs entirely to the arbitrator.

All differences arising out of this policy shall be referred to the decision of an arbitrator to be appointed in writing by the parties in difference, or if they cannot agree upon a single arbitrator, to the decision of two arbitrators, one to be appointed by each of the parties in writing, or in case of disagreement, of an umpire appointed by the arbitrators in writing before entering upon the reference. *The company in any event shall bear their own costs of the reference*, and the costs of the other party and of the award shall be in the discretion of the arbitrator, arbitrators, or umpire making the award, whose award shall be a condition precedent to any liability of the company or any right of action against the company in respect of any claim. And after the expiration of one year after any loss or damage the company shall not be liable in respect of any claim therefor unless such claim shall in the meantime have been referred to arbitration.

THE ARBITRATION ACT, 1889.

As the tendency of all modifications of the arbitration clause is to throw the settlement of disputes

more and more on to the provisions of the Arbitration Act of 1889, policy holders and fire insurance officials cannot study that Act too carefully. I may take this opportunity of giving a summary of its principal points.

The Act was a consolidating measure, but it consolidated only the Acts of Parliament relating to arbitration, and left a large portion of the subject to be found in common law and in judicial decisions. The principal alterations made by the Act as compared with the position prior to it were as follows (my summary is taken from the latest edition of the well-known work by Mr. Lynch on "Redress by Arbitration") :—

(1) The submission to arbitration must be in writing and is irrevocable except by leave of the court or a judge, unless a contrary intention therein appears.

(2) The submission need not be made a rule of court; it has the same effect as though it were an order of court and can be enforced only by leave of the court or a judge.

(3) The attendance of witnesses can be compelled by *sub pæna ad testificandum* or *duces tecum*, which means to give evidence or produce documents such as would be produced at the time of an action.

(4) Certain provisions in the first schedule of the Act are taken to be inserted in every submission unless a contrary intention is expressly contained therein.

(5) An arbitrator may be ordered by the court or a judge to state his award in the form of a special case.

The agreement to refer matters in difference to arbitration is called the submission and must be signed by both parties as a general rule. But where a clause to this effect appears in an insurance policy it binds the policy holder although he does not sign it. For if he sued in the ordinary courts under his policy he would thereby affirm it as his contract, and he cannot disaffirm a part of the contract under which he is suing. That has been settled—“*Baker v. Yorkshire Fire and Life Insurance Company*”.

One arbitrator is thought by many authorities to be better than two, as when there are two the appointment of a third as umpire usually becomes necessary. This is because the arbitrators nominated by the parties are apt to consider themselves advocates rather than judges.

An agreement to refer to arbitration is one which (independently of the Arbitration Act of 1889) cannot be effectually set up as a defence to any action relative to a matter agreed to be referred ; unless indeed the reference has been expressly made a condition precedent to the right to sue. It is expressly laid down in the standard insurance arbitration clause that this reference is a condition precedent. Even in the absence of such an express condition in a fire insurance policy the court has power under the Act of 1889, Section 4, to stay proceedings pending a reference to arbitration as agreed in the policy.

Any person may be appointed an arbitrator, even a lunatic or an infant. In insurance disputes where each side appoints an arbitrator it is customary for

these arbitrators to appoint as umpire a leading barrister who presides much as a judge does in court. If no other mode of reference is provided the reference will be to a single arbitrator.

In the absence of the standard policy clause, and provided that there was a simple clause referring disputes to arbitration, such as in the furniture policy on page 113, the following provisions would be implied :—

(1) There would be a single arbitrator.

(2) The arbitrator would make his award in writing within three months of entering upon the reference, or after having been called upon to act by notice in writing from any party to the submission on or before any later day to which the arbitrator by any writing signed by him from time to time might enlarge the time for making the award.

(3) The parties to the reference and all parties claiming through them respectively would, subject to any legal objection, submit to be examined by the arbitrator on oath or affirmation in relation to the matters in dispute, and would, subject to any legal objection, produce all books, deeds, papers, accounts, writings and documents within their possession or power respectively, which might be required or called for, and to do all other things which, during the proceedings of the reference, the arbitrator might require.

(4) Witnesses would, if the arbitrator thought fit, be examined on oath or affirmation.

(5) The costs of the reference or award would be in the discretion of the arbitrator who might direct

to and by whom and in what manner those costs or any part thereof should be paid, and might tax or settle the amount of costs to be so paid or any part thereof, and might award costs to be paid as between solicitor and client.

The machinery of arbitration is so fully provided for by the Arbitration Act of 1889, of which I have just given a summary from the first schedule, that little more is really needed in a fire policy beyond a clause requiring submission to be made to arbitration in cases where any difference arises.

APPEALS.

Generally speaking, the awards of arbitrators are final on matters of fact while appeals can be made on points of law by means of a special case stated by the arbitrator. But an award may be set aside if (1) any of the requisites of a valid award are wanting, or (2) any reasons exist for which the court would refer the award back to the arbitrator. An arbitration is not something outside the purview of the ordinary courts but is supplementary to them and subject, under the Act, to their control. The court can set aside an award or motion where an arbitrator or umpire has misconducted himself or an arbitration or award has been improperly procured. The misconduct must be strictly proved. There may be misconduct in a legal sense though there is no corruption.

An award on a submission to arbitration may, by leave of the court or a judge, be enforced in the

same manner as a judgment or order to the same effect; and this although the time for moving to set it aside has not elapsed. Where I have used the word court it means His Majesty's High Court of Justice, and judge means a Judge of the High Court. The Arbitration Act of 1889 does not extend to Scotland or Ireland.

ARBITRATION SPECIALLY APPLICABLE TO INSURANCE DISPUTES.

I have given some details concerning the Arbitration Act for two reasons. One is that every insurance official and indeed every one connected with business ought to know its general scope, and secondly, because the real constitution of arbitration courts is quite unlike what is often supposed. A consideration of what arbitration really is and how carefully the legislature has provided for the settlements of disputes under it disposes of the idea which I have seen expressed that the fire offices by their arbitration clause compel the insured to "contract out of their remedy of the courts of the country". It will be seen that arbitration courts are subject to the same rules as are ordinary law courts and that they form a definite statutory part of the judicial machinery of the country. In fact, it is a rare thing nowadays to see a commercial contract on which disputes as to matters of account might arise in which a reference to arbitration is not provided for. The Arbitration Act was passed in order to consolidate the law relating

to the numerous arbitration proceedings which had grown up. The advantage of the method of proceeding before an arbitration, over the hearing by jury, was so obvious that the Arbitration Act specially provided that "if a case or matter requires any prolonged examination of documents or any scientific or local investigation which cannot in the opinion of the court or judge conveniently be made before a jury or conducted by the court through its other ordinary officers," or "if the question in dispute consists wholly or in part of matters of account," the court or judge may at any time order the whole cause or matter, or any question or issue of fact arising therein, to be tried before a special referee or arbitrator respectively agreed on by the parties, or before an official referee or officer of the court. The description of the subjects in dispute which may be conveniently heard before a referee or arbitrator so precisely fits the ordinary differences as to the loss or damage caused by a fire that it looks as if the framers of this section of the Act had this class of dispute in mind.

CHAPTER VI.

AVERAGE.

IN the following chapter I shall direct attention to the subject of "Average" in fire insurance and consider the principles upon which it is based and the manner in which those principles are worked out in practice. It is a subject which has its terrors, but that is only the stronger reason why one should tackle it seriously.

In a fire insurance policy which is "subject to average" there are usually two average conditions, but only the first of these is, strictly speaking, entitled to the name. By the word "average" we mean an arrangement under which the loss or damage caused by a fire is shared between the insured and the insurance company or companies which has granted him an indemnity. Where we have to do with the sharing of a loss between individual companies we have then merely an arrangement for contribution and not an average. It is for this reason that the first so-called "Average Clause" is better named the "*Pro Rata* Average Clause," and the second one dealing with contribution of fire offices merely the "Contribution or Apportionment Clause". By using these names we shall help to clarify our minds and

not to mix up things which are essentially different by including them under the same name.

We shall also tend to greater clearness by keeping the two parts of the subject distinct and by dealing with them as if they had no close connection with one another. Readers will see that where one policy covers two or more properties or interests—a floating policy of which the protection moves backwards and forwards from one property to another, by reason of the changing nature of their values—then the second or contribution clause will have to be applied before the first or *pro rata* clause can come into operation. And this is what must happen in practice. But for our purpose we can leave the consideration of this more complicated application of the contribution or apportionment clause until after we have looked into the elementary principle of average, or the sharing of losses between the insurance companies and the insured.

PRO RATA SHARING OF LOSS.

The *pro rata* average clause at present in use in this country runs as follows:—

Whenever a sum insured is declared to be subject to average, if the property covered thereby shall, at the breaking out of any fire, be collectively of greater value than such sum insured, then the insured shall be considered as being his own insurer for the difference and shall bear a ratable share of the loss accordingly.

The meaning of this condition will be plain by means of an arithmetical example:—

Value of Property	£10,000 at the time of a fire
Insurance	£8,000

Then the value uncovered by insurance is £2,000 and of this the insured is "considered as being his own insurer". We have therefore:—

$$\begin{array}{l} \text{Insurance} \\ \text{at risk of} \\ \text{fire office} \end{array} \left. \begin{array}{l} \} = \text{£8,000} \\ = \frac{4}{5} \text{ of value} \end{array} \right\} \quad \begin{array}{l} \text{Property} \\ \text{at risk of} \\ \text{insured} \end{array} \left. \begin{array}{l} \} = \text{£2,000} \\ = \frac{1}{5} \text{ of value} \end{array} \right\}$$

Suppose a loss occurs of £4,000, then this loss is divided up between the fire office and the insured in proportion to the amount which they respectively have at risk. Thus $\frac{4}{5}$ of £4,000 is borne by the fire office and $\frac{1}{5}$ of £4,000 by the insured.

$$\begin{array}{l} \text{Fire Office pays } \frac{4}{5} \text{ of} \\ \text{£4,000} \end{array} \left. \begin{array}{l} \} = \text{£3,200} \end{array} \right\} \quad \begin{array}{l} \text{Property owner pays} \\ \frac{1}{5} \text{ of £4,000} \end{array} \left. \begin{array}{l} \} = \text{£800} \end{array} \right\}$$

Just the same sharing of loss between the insurance company and the insured takes place where there have been expenses incurred, such as for salvage. These expenses are then divided up *pro rata* in just the same way as for the ascertained loss.

Thus in the above example suppose that £500 had been expended in salving property at risk. Then the office would pay $\frac{4}{5}$ of £500 and the insured would pay $\frac{1}{5}$ of £500. The arithmetical result would have been the same if we had added the salvage expenses of £500 on to the ascertained amount of the loss, making it £4,500 and then split it up *pro rata*, but it is clearer to keep the different factors distinct. If the reader will regard the insured's portion of the risk—the amount, that is, for which he is uninsured—as merely his share in the "adventure," as marine policies put it, then it will be seen that he has to bear his ratable share of all losses and expenses which arise in connection with a fire.

THE EQUITABLE NATURE OF AVERAGE.

It is well to bear one or two points in mind. First, that the *pro rata* average clause has no effect until a loss actually takes place and has to be assessed, and secondly, that it is a precaution against the under-insurance of properties. The principle is so equitable —namely that if an owner of property elects to under-insure he should bear the risk of doing so—that in theory the principle of average might properly be applied to all fire insurances whatsoever. But in practice policies are only “subject to average” when they are specifically declared so to be, and the average conditions are usually applied only to mercantile risks. When a single policy applies to two or more buildings and to goods in two or more buildings it then becomes a “floating policy” and is subject to average.

A similar principle is common in marine insurance, and we find it in the fire insurance practice of most countries. In essence nothing could be fairer both to the insurance companies and the public. When one comes to think of it, it is not quite fair to the public that, say, ordinary single insurances on dwelling-houses should be free from the operation of average. Why should a man whose house is worth £1,000 and who has insured it for £500 be in the same position as regards all damage up to £500 as the man next door who has paid premiums on his full value of £1,000? If it were not for the severe competition among insurance offices for private insurances and their anxiety to do nothing to choke

off this class of business we should probably have seen the *pro rata* average condition of universal application. As Mr. Moore well says in his excellent work: "It would be as unjust to insure the properties of two owners at the same rate, the one insuring for 50 per cent. and the other for 100 per cent., as to assess the values of their properties for the purposes of municipal or State taxation on different percentages of value".

CO-INSURANCE.

In the United States a co-insurance clause has been adopted to a considerable extent with the object of checking under-insurance. Eighty per cent. of the true value is placed as the minimum value for insurance purposes, and if under the co-insurance clause property is insured for less than 80 per cent. then a *pro rata* average condition is operative under which the loss by fire is shared by the insured and the insurance company. This co-insurance clause runs:—

It is a part of the consideration of this policy and the basis upon which the rate of premium is fixed that the assured shall maintain insurance on the property described by this policy to the extent of at least 80 per cent. of the actual cash value thereof, and that failing so to do the assured shall be an insurer to the extent of such deficit, and to that extent shall bear his her or their proportion of any loss that may happen to the said property, provided that, in the adjustment of any loss or damage by fire on stock or merchandise, no inventory shall be required unless the damage is at least 5 per cent. of the amount of the insurance on such stock or merchandise.

This final paragraph of the clause simply provides that in case the amount of the loss under any item

on the policy shall not exceed 5 per cent. of the total insurance no special inventory or appraisement of the undamaged property shall be required. The policies authorised by one important American insurance association waive the co-insurance clause altogether where the loss does not exceed 5 per cent. of the cash value of the property, a waiver which is regarded by many authorities as most objectionable. It is difficult to see why the principle of average, which is admitted on all hands to be just, should be waived in small claims rather than in large ones. The principle of co-insurance is adopted to some extent in this country, notably in the case of farm stock where "average" applies when the insurance falls below 75 per cent. of the value.

Under the American Universal Mercantile Schedule no special proportion of insurance to real value is enforced, but the rates charged under the schedule adjust themselves to the amount which the property owner elects to hold uninsured, in other words, to carry at his own risk. There is no compulsion. The view of the framers of the schedule was that it was as unreasonable to insist upon a man effecting 80 per cent. of insurance on his property—if he wished to avoid the operation of the *pro rata* average condition—as it would be for a merchant to sell less than, say, a hundred cases of goods to a man who was willing to pay a retail instead of a wholesale price. The schedule adopts the analogy between wholesale and retail prices and says: "We do not care how much you insure; you can take as much or as little

as you please ; but our prices will vary accordingly just as your own as a merchant would do ".

The principle adopted by American underwriters in framing the schedule rates was thus that the burden of insurance should be graded according to the percentage of insurance carried to value, and that the property owner who insures a proper percentage of his value is entitled to a lower rate than one who insured only a small percentage. Otherwise one class of citizens would be securing insurance at a lower cost than another and, therefore, at the expense of another. The reader will see this at once if he remembers that rates of premiums must largely be based on the total losses in a trade as compared with the total premiums paid, and that those who fully insured would, if charged the same rates, be paying for the losses of those who only partly insured as well as for their own. The general application of the *pro rata* average condition removes this inequality in rating and would seem to be not only the simpler to apply in practice but really more equitable than the American Schedule method of grading the rate charged according to the percentage of insurance effected. Such grading must be to some extent arbitrary, for no one can say that the 80 per cent. of insurance to cash value on which the normal rates are based is really the most equitable percentage to adopt, or that the additions made to the rate for lower percentages are absolutely trustworthy. On the other hand, an arrangement which makes the insured who chooses to carry a part of the risk himself

a partner in the adventure with the fire insurance companies provides that all losses shall be divided ratably between the parties in strict proportion to the amount of risk carried by them. The difference between the American and the British practice is no doubt due to the more extended use of the *pro rata* average condition in this country. Here the floating policy on mercantile insurances with the "conditions of average" attached is in common use, but this form of policy is comparatively rare in the United States, and in its absence the differential method of rating according to the percentage of insurance to value has been adopted.

EARLY AVERAGE CONDITIONS.

The idea of the *pro rata* average clause seems to have occurred to fire insurance managers at an early date, and we find a clause which bears a strong family resemblance to it in general use by the Royal Exchange Assurance Corporation in 1726. Note that this condition was applicable to all insurances and not merely to mercantile insurances. This average condition ran :—

When more than £1,000 is assured by this corporation on goods and merchandise in one building, and such goods and merchandise in case of fire are not totally consumed, the corporation is only liable to pay and make good such proportion of loss or damage sustained as the sum assured bears to the whole value of the goods and merchandise.

In 1734 the London Assurance Corporation had the following clause in its proposals applicable to all insurances :—

When more than £1,000 is insured on goods or merchandise in any one house or warehouse and the assured have, at the breaking out of fire, goods of greater value, and loss only partial, then the *pro rata* clause to be applied.

The reference here to a *pro rata* clause as if it were well known clearly implies that fire offices had adopted it to a sufficient extent to make its principle obvious without explanation. By the end of the eighteenth century the *pro rata* average condition was in full use, and in 1822 we first see the second or contribution clause making its appearance. In 1828 it was provided by statute (9 George IV., cap. 13) that buildings must be insured separately and goods in two or more buildings must be insured for separate sums in the separate buildings; and if two or more separate subjects, goods or buildings, were insured for one gross sum then the *pro rata* average condition was to attach. This Act was passed in the interests of the revenue, and is stated to have been brought about by an office insuring an amount in a policy to cover several risks not communicating, on either of which it agreed to pay a certain sum in the case of loss, taking, it is understood, full premiums for each but paying stamp duty only on one. In those days the duty was as much as 1s. per £100 of insurance. In 1869, when the percentage duty was abolished, the Average Clause Act was repealed (32 & 33 Vict., cap. 14). In this year, 1869, after the repeal of this Act of George IV., the tariff fire offices agreed that the provisions of the Act in regard to average should still be held as binding upon them and that this

stipulation applied to non-tariff as well as to tariff risks.

THE CONTRIBUTION CLAUSE (AVERAGE).

While the *pro rata* average condition is almost as old as organised fire insurance in this country the second and more complicated condition, relating to the contributions of various insurance policies to a loss, took shape first in 1822. The clause adopted in that year ran :—

But . . . if the . . . assured shall at the time of any fire be insured in this or any other office on any specific parcel of goods or on goods in any specific building or buildings, place or places included in the terms of this insurance, this policy shall not extend to cover the same, excepting as far as relates to any excess of value beyond the amount of such specified insurance or insurances, which said excess is declared to be under the protection of this policy and subject to average.

Under this clause the principle was laid down that a specific insurance on any building or goods in any building takes precedence as regards liability of a general or floating insurance.

I have not space to go into the various forms in which the average conditions have been expressed in this and other countries, and it will serve our purpose if we consider the second or contribution clause as it exists to-day.

That clause is as follows :—

But if any of the property included in such average (THE REFERENCE IS TO THE *PRO RATA* AVERAGE CLAUSE) shall at the breaking out of any fire be also covered by any other more specific insurance, i.e., by an insurance which at the time of such fire applies to part only of the *property actually at risk* and protected by this insurance, and to

no other property whatsoever, then this policy shall not insure the same except only as regards any excess of value beyond the amount of such more specific insurance or insurances, which said excess is declared to be under the protection of this policy and subject to average as aforesaid.

In the words of a well-known fire insurance authority this second condition may be described as the *Magna Charta* of the floating policy, and says : " Thus far shalt thou come and no farther ". By a floating policy is meant any policy which covers, or is expressed to cover, two or more properties or interests. It is a precautionary policy to protect values which are inconstant and which by their inconstancy, their changing amounts, cannot be safely protected by any fixed sum at one place, or on one property or on one interest. The floating policy is designed to give protection where it may be needed, but it does not give protection where a specific insurance has been effected to give protection without its aid. The specific insurance may be called the insured's first line of defence which has to bear the stress of battle, and only when the first line of defence has proved insufficient do the reserves—that is to say the floating policy—come into action. A merchant effects specific policies to cover property upon which he can fix definite measures of value and he then takes the additional course—one which is dictated in most cases by ordinary business prudence—of paying for a floating policy which will cover those parts of his property upon which he cannot fix stable values. It is a policy to supply a possible deficiency in the

specific insurances, and it would obviously be unfair to make the floating policy rank *pari passu* with the specific insurances, for in that case the merchant would lose the additional protection for which he has paid over and above the amount of the specific insurances. From the point of view of insurance companies there is also much to be said for the floating or reserve policies since they produce handsome sums in premiums and contribute to a comparatively small extent towards the claims.

GENERAL PRINCIPLES OF AVERAGE CONDITIONS.

The general principles underlying the two average conditions have been so well expressed by Mr. Pipkin, the chief officer of the Atlas Assurance Company, that I cannot do better than quote his words :—

“ The first condition says to the insured, ‘ If you do not insure to the full value you shall bear a share of any loss that may occur in the proportion that your under-insurance bears to the value ’.

“ The second says to another policy (not to the assured, you will observe), ‘ If you cover only a part of that which I cover then I do not insure the part which you cover ; but if of the part you cover there is any value left over and above your amount, then I will take that under my protection ’.”

There are many sections of insurance in which the first or *pro rata* condition is applied by itself, but where both conditions exist the second must be applied first since the liability under the policy to

which the first relates cannot be determined until after the specific insurances dealt with in the second have been exhausted. For this reason it has been urged that the second condition should be placed first or removed altogether to the back of a policy and stowed away among our old friends the ordinary "Conditions of Insurance," since, strictly speaking, it does not define the principle of average. The *pro rata* clause is the true average clause, the second is merely a contribution or apportionment clause.

EXAMPLES OF AVERAGE.

Now let me try to make the working of the two conditions of average clear by means of an example. I will take a simple one. Suppose that a merchant has two warehouses, A and B, and at the time of a fire he has goods worth £1,000 in A and worth £5,000 in B. Suppose also that he has taken out a specific insurance on warehouse A for £1,000 and has a floating policy of £3,000 on A and B, subject to both conditions of average. The insurances will then be as follows:—

WAREHOUSE A.

Value £1,000.

Specific insurance on A, £1,000.

Floating insurance on A and B, £3,000, subject to average.

WAREHOUSE B.

Value £5,000.

It will be observed that as warehouse A is fully covered by the specific insurance of £1,000, the floating policy really applies to B only and not to A at all.

Suppose a fire does damage to the extent of £500 in warehouse A, then this loss falls on the specific insurance upon A and the floating policy pays nothing.

Suppose again a loss of £500 occurs to the goods in warehouse B. Here the specific policy on A is not affected and the floating policy pays three-fifths of £500.

Suppose again a loss of £1,500 occurs in A and B, £500 in A and £1,000 in B. The specific insurance pays the £500 in A and the floating policy pays three-fifths of the £1,000 in B.

I will now take a more complicated example:—

WAREHOUSE A.

Value £1,000.

Specific insurance on A of £500 subject to average.

Floating policy on A and B of £3,000, subject to average.

WAREHOUSE B.

Value £5,000.

A loss occurs of £500 in warehouse A, the specific insurance pays one half of £500 or £250. As the goods in warehouse A are covered by a specific insurance of £500 the excess value uncovered specifically is £500, and the total value to which the floater applies in A and B is £5,500. As the amount of the floater is £3,000 it, under average, is responsible for six-elevenths of any excess not protected by the specific insurance, that is $\frac{\text{£3,000}}{5,500} = \frac{6}{11}$.

The specific policy therefore pays one-half of £500 or £250, and the floater pays six-elevenths of the balance of £250 = £136 7s. 3d.

The loss of £500 is therefore paid as follows:—

Insurance policies	{	Specific on A	£250	0	0
		Floater on A and B	136	7	3
			£386	7	3
Insured's own loss	.	113 12 9			
Total	.		£500	0	0

DIFFICULTIES IN PRACTICE.

While the object sought to be attained by the second or contribution clause is clear enough yet in practice it has been found difficult to adopt a wording which will meet all cases. In 1843 a condition called the Independent Liability Clause for certain mercantile policies of wide range in Liverpool was added. The object of the ordinary second condition is to establish the order in which policies of various ranges should be brought into contribution in case of a loss. For in practice the simple examples I have given are not always to be found. Cases have occurred when a nominal extension has been given to the range of a policy in order that it may be the last to contribute after exhausting the amount of any specific policy (not subject to average) and the amount of the liability of floating policies of limited range, subject to average. In order to check this practice the tariff offices adopted in 1860 a third condition of average cutting short the range of a policy by limiting it to the *existence* of the property at risk, and as this was not found sufficient a form of policy was adopted to prevent the widening of range. The independent liability clause above referred to was then abolished. The third condition did not work satisfactorily and in 1882 the Fire Offices' Committee adopted the two average conditions at present in use.

The present second or contribution clause was designed to effect three objects, namely, to provide:—

1. For the insurance by a policy of wider range merely the excess in value beyond the amount of more specific insurances.
2. The prevention of mere nominal extensions of range.
3. The clear definition of the meaning of the term "more specific insurance".

The importance of this question of the "range" of a policy will be obvious when we consider that a specific policy ranks first in respect of liability, and then follow other policies *in the order of their ranges*, the widest or most comprehensive floater coming last. Both in 1877 and in 1894 the fire offices have broken their teeth over a horribly hard bone. They have had to deal with cases like this.

Policies A fully covered stock and utensils only in certain premises and a loss occurring on stock and utensils was paid in full under those policies. They were, in fact, specific policies.

Policy B covered stock, utensils and fixtures in the premises.

Policy C covered fixtures only in the same premises.

This was the precise case in 1877 and that in 1894 was on similar lines. There was no trouble in regard to the specific policies A and they paid the whole loss on stock and utensils. But as regards B and C the difficulty was this. Seeing that the stock and utensils were fully covered by policies A, which had discharged the claim, there was no stock or utensils at risk "at the breaking out" of the fire to

be covered by policy B, and therefore it was claimed that policy B really covered fixtures only and was of the same range as policy C and should contribute ratably to the loss on fixtures. The case was referred to the then existing District Committees of the Fire Offices' Committee, and they held that it was only the non-existence of property in the wider range that could assimilate two ranges. Therefore policy B was entitled to escape liability for a loss on fixtures which was fully covered by policy C. The umpire to which the similar case in 1894 was referred decided it in the same sense as the case mentioned above, but he stated that the ambiguity existing in the second clause might with advantage be removed.

Accordingly in 1895 the fire offices appointed a sub-committee which laid down the following:—

Principles to be Maintained by Average Conditions.

1. That in case of under-insurance the offices shall bear only such a share of the loss as the sum insured bears to the value of the property at the time of the fire.
2. That a policy covering two or more properties existing at the time of a fire is of a wider range than a policy insuring a part only of such property and no other property.
3. That the range of a policy is not curtailed by the fact that the whole or a part of the property within the range is fully covered by a more specific policy.
4. That the liability of such policy of wider range is restricted to any excess of loss over and above the amount for which a policy of a more limited range is liable.

Amended clauses as follows were drafted but they have not been submitted for general adoption:—

1. Whenever an insurance is declared to be subject to average, then if the total value of the property to which such insurance applies shall at the time of the breaking out of any fire exceed the amount of such insurance, the liability of the company thereunder shall not exceed such a proportion of the loss or damage as the amount of such insurance bears to such total value.

2. If at the time of the breaking out of any fire there shall be any other insurance expressed as applying to part only of the property actually existing at such time and expressed to be hereby insured, and to no other property then existing, the company shall not be liable under this policy for any loss or damage in respect of the property to which such other insurance applies, except only as regards any excess of value of the same beyond the amount of such other insurance.

The average clauses in use on the continent of Europe express clearly the *pro rata* principle, and the following have been adopted in France, Germany and Austria-Hungary :—

FRANCE.

Pro rata Clause.

If the value of the property covered by the policy is found in case of loss to be less than the sum insured, the insured shall not be entitled to recover more than the amount of the actual loss, as the insurance must never be a source of profit to the insured.

If, on the other hand, it should be found that at the time of the fire the value of the property covered by the policy is of greater value than the sum insured thereon, the insured shall be his own insurer for the excess and shall bear a ratable share of the loss accordingly.

Under no circumstances can the company be called upon to pay more than the sum insured and its share of the cost of the assessment.

GERMANY.

Pro rata Clause.

If at the time of a fire the value of the property insured exceeds the sum insured thereon, or if there be any other subsisting insurance or insurances, the loss shall be made good in a ratable pro-

portion. If the property insured is of less value than the sum insured thereon, the loss or damage shall be made good on the basis of the smaller value only.

AUSTRIA-HUNGARY.

Pro rata Clause.

If at the time of the loss or damage the property insured shall be of less value than the sum insured thereon, the adjustment of the claim shall be effected in accordance with such value.

If at the time of the loss or damage the property insured shall be of greater value than the sum insured thereon, the loss or damage shall be made good in the proportion which this greater value bears to the sum insured.

If the company shall have insured a share only of the total sum insured, the company shall be liable only to pay a similar share of the ascertained loss.

If there be any other subsisting insurance or insurances covering the same property and allowed by the company, the loss or damage shall be made good in the same proportion that the sum insured by the company bears to the total amount insured.

AVERAGE EXAMPLES SHOWING RANGE OF POLICIES.

WAREHOUSE X.

£10,000 of sugar
(specific policy of
£5,000 on sugar).

WAREHOUSE Y.

£20,000 of sugar and
general merchandise
(£10,000 sugar).

WAREHOUSE Z.

£15,000 of general
merchandise.

I.—Policies effected:—

- A. Specific of £5,000 on sugar in X.
- B. Floater on X and Y of £10,000, subject to average.
- C. Floater on sugar in Y and Z of £10,000 subject to average.

A fire loss of £5,000 on sugar occurs in Y, and at the time of the loss there was no sugar in Z.

The specific policy A is not affected.

Consider the floater C on sugar in warehouses Y and Z. As there was no sugar in Z at the time of the fire this floater C becomes a specific insurance on sugar in Y and takes precedence in respect of liability of the wider-range policy B. There was £10,000 of sugar in Y, and the policy C is for £10,000, therefore C pays the whole loss of £5,000.

II.—Policies effected :—

- A. Specific of £5,000 on sugar in X.
- B. Floater on X and Y of £10,000, subject to average.
- C. Floater on sugar in Y and Z of £5,000, subject to average.

A fire loss of £5,000 on sugar occurs in Y, and as before there was no sugar in Z at the time of the fire.

The specific policy A is not affected.

Policy C becomes specific on the sugar in Y since there was no sugar in Z, and takes precedence of B to the extent of its liability. This liability is for £2,500 = $\frac{\text{£5,000}}{\text{£10,000}} \times \text{£5,000}$ damage under *pro rata* average clause.

Now the wider-range policy B comes in. This policy is for £10,000 and the goods covered by it amount to £20,000 (£5,000 in X uncovered by A, and £15,000 in Y of sugar and general merchandise, uncovered by sugar policy C).

Policy B therefore pays half of the balance of £2,500 damage done = $\frac{\text{£10,000}}{\text{£20,000}} \times \text{£2,500}$ or £1,250.

The loss of £5,000 is therefore paid for as follows :—

Policy C pays	£2,500
Policy B pays	1,250
Proprietor of the contents of warehouse Y pays . .	1,250
Total	<u>£5,000</u>

CHAPTER VII.

RATING OF RISKS AND TARIFFS.

I HAVE already said something in my chapter on the distribution of loss of the objects and effects of tariffs and differential rating and I propose now to deal with the subject in more detail and to endeavour to make clear the principles which must lie at the root of all attempts to frame efficient and equitable rates in fire insurance. The primary object of a scale of rates, whether they are laid down in a tariff or have arisen out of the daily experience of fire insurance managers, is to provide a fund which will meet the losses from fire which occur, will provide for the expenses of administration and for the building up of reserves, and will then leave over a sufficient margin for the payment of dividends to proprietors. Fire insurance companies are not philanthropic institutions, and it is as much in the interest of the public as of shareholders that they should be abundantly strong and yield sufficient profits to attract the necessary capital and also to preserve a high level of credit. All insurance companies live by credit. They are paid in advance for the services which they render, and credit is as much necessary to them as it is to a bank.

THE TWO OBJECTS OF RATING.

While, however, the primary object of rating is to secure sufficient premiums to meet the financial requirements of the companies there is a secondary and, from the public point of view, an even more important object. This is to keep down the severity of fires and to minimise the losses from this cause by which a community suffers. Every loss by fire is a dead loss. There is no return possible for the destruction of property. All that fire insurance companies do is to produce fresh capital in the place of that which has been lost. It is therefore in the interest of the public that fire losses should be reduced in every possible way, and this interest is fully recognised by the provision of Building Acts and fire brigades administered and supported by local authorities. But although fire insurance companies have no direct power to compel the use of the best appliances and the best materials for construction, and thus to prevent fires, they have an immense indirect power of penalising those who will not make use of the best materials and means of construction and will not adopt the appliances which experience has shown to be essential if the fire hazard is to be minimised. I hold no brief for a tariff organisation—in fact I have expressed my view plainly that the competition of non-tariff companies and of private underwriters is wholesome as tending to prevent tariff offices from becoming hidebound—but it must be allowed that *full and systematic pressure in the direction of*

fire prevention can hardly be depended upon unless at least the majority of the fire insurance companies are pledged to stand together and insist upon penalising those owners of property who will not conform with their requirements for the prevention of fires. In marine insurance, where there is no general tariff and we see free competition between companies and Lloyd's and between insurance markets in London, Liverpool, Paris, New York and other centres, the difficulty as regards construction and appliances is to a large extent got over. Ships are built under the superintendence of the surveyors of Lloyd's Register of British and Foreign Shipping—which is quite distinct from the Society of Lloyd's, though underwriters are represented upon its committee equally with shipowners—or of the surveyors employed by the Bureau Veritas and other similar foreign organisations. Vessels are classified by these bodies and the works of reference published under their authority contain the particulars which marine underwriters find it necessary to know. If buildings on land could be surveyed and classified on some such system much of the work of the tariff offices would be unnecessary and the method of differential rating would be greatly simplified. But in practice it is quite impossible to apply on land a system which is easy enough to apply as regards ships, and it so happens that the fire offices by means of tariff rules and differential rates have to do for themselves much of the classification which in marine insurance is done, and, from the nature of the case, done more efficiently by Lloyd's Register and kindred bodies. I would ask

my readers to keep this parallel in their minds and to consider a tariff from two points of view, (1) that of providing a remunerative premium, and (2) that of providing a means of classifying or grading risks according to hazard and a means of making property owners pay in proportion to the fire risks which are actually incurred.

CLASSIFICATION OF RISKS.

There is no general and scientific system of rating risks in this country which can be compared with that attempted under the American Universal Schedule, but I shall be able to show that the tariffs here are drawn up on a method which fulfils an important public service, while at the same time there is sufficient competition among the different classes of insurance companies represented on the Fire Offices' Committee to prevent rates being raised unreasonably high. If all the companies did foreign as well as home business there might be a danger that the losses on foreign risks might be recouped by too high rates on home business. But several companies of the highest standing and influence do nothing but home business, and it is in their interest to see that the rates laid down are not more than are sufficient to provide for the losses, expenses, reserves and reasonable profits. In fact, the method under which the rates chargeable to a trade or a section of property owners dealt with under a tariff are determined is alone sufficient to show that each trade or division is looked at strictly on its own merits.

If business in the books of any company is properly classified a fire manager can tell almost from day to day whether he is gaining or losing money on a particular class of risks. A good manager will have all his insurances classified by trades, construction of buildings, towns, counties and agencies. He will have all the premiums and outgo entered under the various headings and keep also a watch on the causes of fires. By means of periodical returns from all his branch offices he will be able to maintain the closest watch over the whole business which is under his control. He can sort out profitable trades, in the fire insurance sense, from unprofitable ones and can classify towns and counties of good reputation and readily distinguish them from those which are insufficiently supplied with fire-extinguishing appliances or with efficient brigades. He can also quickly tell whether his agents and branch officials exercise proper care in satisfying themselves concerning the good faith of the persons who make proposals for insurance. It is, in fact, not too much to say that the materials exist, or could rapidly be compiled, sufficient to form the basis for as elaborate a classification and rating as that which was seen when the American Universal Schedule was framed. But at present very much of the classification is left to the individual fire insurance managers for the conduct of their own operations and does not form part of the common stock from which the tariff rates are framed. In fact, the tariff rates and subdivisions to which I shall refer presently form rather a general

outline than a complete picture, and leave much detail to be filled in by individual managers.

HOW RATES ARE DETERMINED.

We will now suppose that several fire offices, by means of the classification to which they have subjected their business, have discovered that a class of risks has proved unprofitable for some time. If the class is an important one and the unfavourable experience appears to be at all general then a *prima facie* case is made out for inquiry by the whole body of tariff offices represented on the Fire Offices' Committee. Each company then prepares a detailed statement of its premium income for some years past and the fire losses on the class under investigation. No company sees the returns prepared by any other company but they are all handed in, in the strictest confidence, to the chairman of the committee, who is at present a barrister and has no connection with any company. The chairman tabulates the returns and submits the results to the full committee, or in the first instance to a sub-committee, for consideration and report. If it be found from a careful examination of the tabulated facts that a strong case has been made out for a revision of an existing tariff, or for the preparation of a new one, a change is accordingly made. The revised rates, as soon as they have been accepted by all the members of the Fire Offices' Committee, come into operation. A proceeding of this kind is a purely statistical operation

based on past results over a wide area—the operations of all the tariff companies—and there is nothing arbitrary about it. Some similar method is the only possible one for arriving at an accurate premium for a particular risk, and it is much fairer to the public that rates should be based on a general experience than that they should be founded on the possibly exceptional experience of individual companies. I have for the moment spoken only of advances in premiums, but in practice the process of reductions goes on almost as much as that of advances. When rates are raised on one part of a class or trade it is frequently found possible to reduce them on another part and reductions are accordingly made. For example, when the tariff rates on farm dead stock were advanced some little time since, the rates on live stock were at the same time reduced. Quite recently the tariff rates on London mercantile risks have been reduced (February, 1904). Pressure is always going on towards the reduction of rates. Those offices which make a profit on a class of business and see their way to extend their operations have a strong objection to the rates being put up; they would probably, if the profit were considerable, prefer that a reduction should be made in order that more business of the kind might be obtained. It is commonly supposed among the public who pay premiums that fire insurance companies like high rates. But I have never found any basis for this belief. I have always found that low rates and a small fire hazard are vastly preferred to high rates

and a high fire hazard. The best classes of business, the gilt-edged business which every fire manager likes to have on his books, pay the lowest premiums and the undesirable risks are generally subject to very high premiums. In practice it is found that the low-rated risks, at premiums from the minimum of 1s. 6d. per cent. to about 3s. 6d. per cent. per annum, yield the highest degree of profit and are in every respect the most satisfactory.

HOME AND FOREIGN RATES.

My readers are no doubt aware that fire insurance premiums on home business are very much lower than on most foreign business—the premiums in the United States and Canada are notoriously high and have recently been still further advanced. An examination of the annual returns of the insurance companies which transact nothing but home business shows a considerably higher average rate of profit to premium income than in the case of the great “international” companies with operations in all parts of the world. It has been suggested that the higher profit on home business is excessive and that home rates are kept up in order to pay for losses on foreign business. I do not think there is anything in this for several reasons. In the first place, it is unlikely that companies with home business only would consent to over-high rates, which would have the effect of choking off business, merely to please companies with foreign business. They would have no

interest in doing so. Then it must be remembered that a large part of the most profitable home business is non-tariff and is subject only to the rule which fixes the minimum premium at 1s. 6d. per cent. What is more, even if the whole profit on the low-rated home risks were given away the amount of premium would be so small compared with that derived from the high-rated foreign risks as to make no appreciable difference. No, the truth is that low rates on risks of small hazard are able to yield a higher rate of profit than heavily rated risks simply because the rates are low. Let me explain. The phenomenon is not peculiar to fire insurance; it is seen just as prominently in marine insurance where gold bullion and specie insurance at 1s. per cent. and even less are readily written in large lines. Suppose that it is found that the cost of insurance—losses, expenses and reserves—on a certain class of business is 2s. per cent. per annum. Now, if an office charges 2s. 6d. per cent. it makes a 20 per cent. profit on the premiums derived from this class and there is in practice little difference between a 2s. 6d. rate and one, say, of 2s. 3d. I mean that property owners who were charged 2s. 6d. would not probably press for a reduction to 2s. 3d. By charging 2s. 6d. the companies get a 20 per cent. profit although the margin from which profits are derived is only 6d. per cent. Now consider a foreign risk, say in Canada, costing 30s. per cent. for losses, expenses and reserves. In order to make the profit of 20 per cent. on premiums just mentioned it would be neces-

sary to charge property owners 37s. 6d. per cent. whereas the companies could make a 10 per cent. profit by charging 33s. 4d. per cent. There is a good deal of difference between 33s. 4d. per cent. and 37s. 6d. per cent., and it may easily be not practical for insurance companies to charge as much as 37s. 6d. and have to be content with 33s. 4d. In the first case I mentioned the difference between a 10 and a 20 per cent. profit on the premiums was little more than 3d. per cent., which the insured would hardly notice, and in the second case the difference was as much as 4s. 2d. per cent. which the insured would almost certainly notice a good deal. This example will make it clear that it is much easier to allow a wider margin of profit on a low-rated than on a high-rated risk, and, quite apart from any great variation from year to year in fire hazards, we should expect to find a higher rate of profit earned on low-rated risks than on those for which high premiums are charged. And that is just what we do find, not only in fire insurance but also in marine insurance.

I have indicated the manner in which materials are collected and tariff rates based upon them. It has been the practice in this country not to form tariffs or to alter them unless sufficient cause was shown in each case, so that while there are fifty-seven classes of trades, towns and property subject to tariff rates and regulations (many of them with subdivisions) the ground has not been covered in any systematic manner.

The following is the list of tariffs :—

BRITISH TARIFFS.

Belfast.	Hull Timber Yards.
Bermondsey Tanneries.	Hull Warehouses.
Bleach and Dye Works (Ireland).	Lace Warehouses and Factories.
Bonded Stores.	Leeds Carriers' Warehouses.
Boot and Shoe Factories and Warehouses.	Leith and Granton.
Brick and Tile Works.	Liverpool Mercantile and Carriers.
Bristol.	London Manchester Warehouses.
Cement Works.	London Mercantile.
Clothing Factories.	Manchester Warehouses.
Cold Storage Warehouses.	Manchester Mercantile and Carriers.
Corn and Rice Mills.	Metal Workers (Scotland).
Cotton Mills.	Nitrates, etc.
Crystal Palace.	Oil Mills.
Distilleries (Scotland).	Petroleum.
Esparto.	Potteries.
Farming Property.	Rice Mills.
Flannel Factories (Wales).	Royal Albert Hall.
Flax and Jute Mills.	Ships.
Flax, etc., Warehouses (Scotland and Ireland).	Shirt Factories (Ireland).
Fleetwood Dock Warehouses and Sheds.	Shops.
Floor Cloth Factories.	Sugar Refineries.
Furniture Storing Warehouses.	Tanneries.
Glasgow and Paisley.	Timber.
Glass Works.	Tyne, etc., Ports Mercantile.
Gloucester and Sharpness.	Wood Workers (Scotland).
Granaries.	Woollen, etc., Warehouses.
Great Grimsby.	Woollen, Blanket and Flanne Mills, etc.
Hop Oasts.	Worsted Mills.
Hosiery Warehouses and Factories.	

FIRE HAZARDS IN VARIOUS TOWNS.

The most striking omissions from the British method of tariff rating are two. First there is hardly any distinction between the fire hazard in various towns—an essential part of the American Universal Schedule—and there is little distinction between the rates of premium on buildings and on the goods which they contain. I am speaking of tariff risks now, not of such things as private dwelling-houses and furniture where a distinction of rates is drawn. In a few cases where certain towns have proved specially hazardous for various reasons a tariff has been drawn up in regard to them. These towns are Belfast, Bristol, Great Grimsby, Glasgow and Paisley, Leith and Granton and Gloucester and Sharpness. Special tariffs also relate to warehouses in Fleetwood, Hull, Leeds, Liverpool, Manchester and Tyne ports, but all these tariffs are compiled *ad hoc* and not as part of a system covering the whole country. In the United States under the schedule a locality where the fire loss was on average \$5 per \$1,000 of insurance per annum during five years is taken as a standard and in localities where the annual fire loss shows a higher average an addition to the rates of premium has been provided. The addition for each one dollar of loss in excess of five is 20 per cent. of the minimum or key rate, an addition which amounts to 10 cents on each \$100 of insurance, and this addition approximately maintains the equilibrium between the fire cost and

rate of premium. The Standard City under the schedule must have a fire record for the preceding five years of not more than \$5 per \$1,000 of insurance, gravity waterworks with sufficient power to throw over five-storey buildings, water pipes of not less than six inches diameter in the dwelling section and of eight inches in the mercantile section, a paid fire brigade, two steam fire engines to each square mile of compact area or one to each 10,000 of population up to 500,000, fire-alarm telegraph, efficient police, good and wide streets of which say 60 per cent. are seventy feet or more in width, a good building law well enforced and no outlying exposures to cause sweeping fires. There are other provisions but these are sufficient to show the class of city reckoned as standard. In the British tariff there is no such thing as a Standard City and no general computation of fire losses in different localities. Individual offices do keep a very close watch on the hazardous character of the various towns and counties and pay attention to the efficiency of fire-extinguishing appliances within the areas, but there is no general application of the data thus acquired by all the offices combined except as regards the special and exceptional towns for which tariffs have been drawn up.

FIRE-RESISTING CONSTRUCTION.

When, however, we come to construction and consider the Standard Building we then see that the fire offices under the British tariff have given much

attention to this most important matter. Rules are laid down describing in detail the standard fire-resisting buildings to which the most favourable terms under the various tariffs apply. These rules deal with height and cubical contents, walls and partitions, flues, openings in walls, floors, roofs, protection of structural metal work, linings and ceilings, floor openings, shafting through walls, pipes and electric conductors, and communicating compartments. As these rules are confidential—unnecessarily so, it would seem, as the more widely known they are the better for fire insurance and building generally—I must confine myself to the barest outline of them. Walls, external or party, must be of hard incombustible materials of not less than a prescribed thickness, and party walls must extend well above the roof of adjoining buildings. Flues must be fireproof and floors, where not fireproof, must conform to definite conditions. Roofs must be entirely of incombustible materials, and metal columns, girders and so on must be protected by a fireproof covering. Unprotected metal from its liability to weaken and bend under heat and also to expand is a serious danger to buildings. Openings in walls and floors are regulated so as to minimise the setting up of strong draughts which would increase a fire. Speaking in general terms a standard fire-resisting building under the British tariff is one which is very difficult to set on fire and one which will offer as few facilities to the progress of a fire as possible should one happen to occur. It is

hardly too much to say that the fire offices, by giving favourable terms for construction designed expressly to prevent fires, have done more to reduce the fire danger in our cities than the efforts of legislators and municipal administrators during several generations. In many respects the fire offices have set a standard which even now is tardily recognised by building legislation.

By insisting upon a high standard of incombustible materials and means of construction if the lowest rates are to be obtained fire insurance companies have done much to reduce the fire hazard, but by differential rating they have done still more. It may be contended that the penalising of buildings and their contents when the best means are not taken to prevent fires has not gone far enough—the British tariff does not go so far as the American Universal Schedule—but it has probably gone as far and as fast as this conservative and illogical country can stand.

PENAL RATES FOR DANGEROUS BUILDINGS AND APPLIANCES.

Let us now consider a tariff and observe how the system of rating adopted in this country tends to give a bonus to those owners of property who will conform with the best conditions and penalises those who will not. Under the method of discounts on normal rates, and additions to them, not only is the expense of meeting fire losses charged to property owners in some proportion to the risks incurred by

them, but also the pressure of the high rates for hazardous construction or appliances powerfully tends to compel the adoption of recognised improvements. The central fact to be recognised is that fire offices by encouraging the reduction of fire hazards by means of reduced rates are not only benefiting themselves but also are conferring a very important benefit on the whole community.

Take now the cotton mills tariff, England and Ireland. The lowest normal rate applies to standard fire-resisting buildings, and other buildings are rated on a considerably higher scale. After setting out the minimum rates there is laid down a list of additional rates in non-fireproof buildings for many things which are considered to increase the fire hazard. These are defective construction, height above four storeys, floor openings other than those allowed, methods of lighting and heating, night work, electro-motors and various processes in connection with the blowing of cotton previous to carding. These additions are made to buildings which do not come in a category of "Fireproof". Fireproof buildings or storeys have a section to themselves and the rates charged are much more favourable than those where additions have to be made on account of hazardous construction and appliances. In each of the sections applicable to buildings used for the various cotton processes we find a normal rate laid down, and then if the buildings are not "Fireproof" additional rates are chargeable for defective construction, lighting by incandescent gas,

electro-motors and so on. Buildings rated as "Fire-proof" and their contents are under this tariff much more favourably treated than buildings and contents not so rated, and in addition a discount is allowed if the buildings rise above the mere description of "Fire-proof" and conform with the full conditions of a standard fire-resisting building. Cotton spinners by adopting standard fire-resisting buildings are therefore at the top of the scale and pay the lowest rates, then come those whose buildings are reckoned as "Fireproof," and then in a long descending scale those whose buildings are not fireproof and who have besides methods of lighting, working, etc., which call for additional rating. I am not able from the confidential nature of tariffs—several of which by courtesy of the Fire Offices' Committee have been placed at my disposal—to give more than a cursory description of the system, but I may perhaps say roughly that a cotton mill which was on the lowest plane as regards construction and appliances would be charged for fire insurance several times as much as one which could rank as a standard fire-resisting building with the best appliances. This great difference will show how powerful is the inducement for property owners to adopt only the best forms of construction and appliances.

REDUCTIONS IN RATES.

I have dealt with additional premiums and we may now look at reductions on normal rates for fire-

extinguishing appliances. An approved installation of automatic sprinklers may reduce the rates of premium which would otherwise be charged by more than half, and large allowances are also made for the presence of steam fire engines and a trained brigade of firemen. Some allowance is also made for other means of fire extinction either by water or chemicals.

Supposing that a building were classed as standard fire-resisting the owner would first get a liberal discount off the rates charged for "Fireproof" buildings and appliances, and then if he had a sprinkler installation he would get a further discount on the net premium, that is, the gross premium less the allowance for special construction.

OBSERVATION INTO CAUSES OF FIRES.

The system of grading premium rates according to risks incurred, which I have briefly sketched, depends for accuracy upon elaborate investigations into the causes of fires. This inquiry into the cause of fires is not less important than classification, since the penal rates under a tariff aim at eradicating fires, and they cannot be effective unless they are directed at true and not imaginary causes. Mr. T. A. Bentley, in a paper read before the Manchester Insurance Institute in 1899, gave the results of an investigation into the fires in cotton mills which had been observed during the previous twenty years. It was found that more than one-half of the total number were due to friction set up during the processes of spinning, etc.

Lighting with gas caused 4·3 per cent. of the fires, and an alteration in the manner of placing the lights and the introduction of electric lighting has removed much of this danger. As observed up to 1899 there had only been one fire through defective electric installation. The unknown causes of fire were 27·6 per cent. of the whole, 20·2 per cent. being in mills without a sprinkler installation and 7·4 in mills which were installed with sprinklers. Mr. Bentley showed by analysing the returns of fires in cotton mills that had occurred from 1879 to 1898 that there had been great check on the fire waste during the period, and that the average loss per fire was nearly twice as much in the early part of the period as it was throughout the twenty years, and that during the latter part, 1894-1898, the loss per fire was considerably less than the twenty year average. This reduction in the fire waste was attributed to improved methods of spinning, etc., the introduction of electric light and the fitting of extinguishing appliances, especially the introduction of automatic sprinklers. It is therefore clear that the efforts of the fire offices to encourage the best form of construction and appliances, the use of electric light instead of gas and the provision of extinguishing appliances have had a very marked direct effect upon the fire waste suffered by cotton mills. I have taken this merely as an example and as some indication that the system of differential rating, which is a feature of the British tariff, is directed towards definite ends and has, as far as can be judged, been

instrumental in achieving these ends and in lessening fire hazards.

THE CONTENTS OF BUILDINGS.

I have already referred to what may be called the cardinal defect of a British tariff, namely, that it makes no adequate provision for rating the contents of buildings as distinct from the buildings themselves. In some cases, as for instance the cotton tariff, a slightly higher rate is charged for contents in some sections than is charged for buildings, but the additions and reductions are based on the general assumption that the fire risks of contents and buildings are the same. Not only is this not the case but the difference of risk is in some cases very great. The great majority of fire claims are for partial losses and in nearly every case of a partial loss the percentage of loss to value is greater in the case of stocks than of buildings containing them, the loss ratio on stocks being sometimes as much as four times as great. By rating stocks and buildings together we arrive at two inequalities—as the fire risk on stocks is greater than on buildings a uniform rate must bring out too small a premium for stocks and too large a one for buildings. What is more, a system of differential rating which might equitably be applied to buildings would cease to be equitable when applied to stocks and *vice versa*. This point is clearly brought out by a consideration of the principles governing the American Universal Schedule, which makes a prominent feature of the distinct rating of stocks and buildings.

The framers of the schedule argued like this: Certain features of construction, such as self-releasing floor beams for instance, which improve a building, are of no benefit to stock. The stock therefore should not receive credit for them in the rate. A system of rating by adding some fixed sum to the final building rate to get the stock rate must, by a process which recognises features which are not of advantage to the stock, result in an inadequate stock rate. Then again it is urged that fire-extinguishing appliances, especially for throwing water, should not receive credit in computing the rates for stock to the same extent as in computing rates for buildings because water damages stock to a greater extent than buildings. Then, exposure to outside fire risks should be treated differently in the case of buildings and stock. A building may be so constructed as to be a complete protection to its stock but require an addition to its own rate for possible damage to the exterior by an outside fire. The same exposure charge has always been added to building and stock rates alike except in the Universal Schedule. The points above discussed are all recognised in the Universal Schedule and in no other schedule, and it will be seen that a full consideration of the essential differences in risk between buildings and stocks opens out a wide field of interesting inquiry.

I have explained how the Standard City is described in the American Schedule, and it is hardly necessary to describe the Standard Building as it does not differ in principle from the standard fire-

resisting building of the British tariff. The key or base rates are derived from the risk run by the Standard Building in the Standard City with extras added for deficiencies. The feature which will, I think, best repay study is the manner in which the effect of contents on a risk is dealt with. It is contended with much force that not only should contents be rated under different principles from buildings, and the additional fire hazard given full weight, but also that every class of merchandise should be treated as of a threefold character.

(1) With reference to its liability to ignite easily. Among stocks of this character are oils, drugs, furniture, etc.

(2) With reference to it as furnishing fuel for intense combustion, likely to destroy the building and its contents. Such stocks are furniture, wood, wholesale drugs and so on.

(3) With reference to its own susceptibility to damage by fire, water and smoke. Such stocks as millinery, toys, etc. This is a feature which affects its own rate only.

In the Universal Schedule the various classes of stocks are arranged alphabetically and the figures measuring the first two qualities are entered in the first column and are to be added to the building rate in order to ascertain its occupied rate. In the second column is inserted the figure intended to measure the susceptibility to damage from water, smoke, etc., which has to be added to the occupied building rate to obtain the rate for the particular kind of goods to

be insured. Under this system goods in a building would not all pay the same rate, and that the rate of the worst class, as in most systems of rating, but would pay rates graded according to their standing in respect to the three points described. For instance, if pig-lead was in the same building with millinery it would not pay the same rate since the millinery would be charged an additional premium owing to its susceptibility to water and smoke damage. The idea of distinguishing in this way between the various contents of a building and grading them individually according to risk will seem strange to those who have not looked beyond the systems adopted in this country.

EXAMPLE OF RATING BY AMERICAN UNIVERSAL SCHEDULE.

Now let us take a detailed example of rating by the Universal Mercantile Schedule and see how the various considerations of risk are given effect to. It will, I think, prove a useful stimulus to thought and show how large are the possible applications of scientific rating. I am indebted for this example to Mr. Moore, the Chairman of the Schedule Committee. It is derived from his work on "Fire Insurance and How to Build".

Section A.—To get the key or base rate for a building. The key rate for a Standard Building in a Standard City is 25 cents per \$100 of insurance per annum.

	Cents.
We start therefore with	25
Now assume that additions have to be made for the following variations from the Standard City:—	
Waterworks, direct pressure system, pumps by steam power in duplicate	4
Absence of standpipe or intermediate reservoir affording a supply in case the pumping machinery should not work	2
No fire marshal	2
No building law	3
Electric trolley railroad	2
Natural gas for fuel	2
Total	40
From this, if auxiliary steamers are provided, a deduction of 5 per cent. would be legitimate making the key rate of the city	38

Section B.—Now we have to consider what additions must be made to the key rate for the city on account of deficiencies in the building below the standard. Suppose the deficiencies are as follows and that the extra premiums as below have to be charged:—

	Cents.
Walls, not according to standard	2
Slate Roof	2
Floors, ordinary	5
Area	3
Stairways	10
Lighting by kerosene	2
Heating by furnace	3
Total	27

Result.—Rate of building *unoccupied* 38 cents + 27 cents = 65 cents.

Now observe that while the considerations in Section B are given full effect to in British tariffs those

in Section A are ignored except in those few instances in which towns or certain buildings in towns are subject to special tariffs. There is no general system applicable to all towns such as the one described.

Section C.—Stocks. In order to find the key rate for stocks in a building we take the *Unoccupied Building Rate* and deduct 25 per cent. of the charge for deficiencies below the standard since these affect the building more than the stocks. In this case, as the Standard Building in the Standard City is rated at 25 cents and the key rate for the unoccupied building was found to be 65 cents, the charge for deficiencies was 40 cents ($65 - 25$) ; 25 per cent. of this is 10 cents, and 65 less 10 gives us 55 cents as the *key rate of the building for rating stocks contained in it*. The deduction of 25 per cent. from the deficiencies is based on the experience that these deficiencies cause a greater risk to buildings than to goods contained in them.

Key Rate for Stocks, 55 cents.—If this is a single occupancy building for, say, retail dry goods, we look up this item in the schedule and find that 50 cents have to be added for their own susceptibility to damage. Thus we get the rate for dry goods as 105 cents per \$100 of insurance, namely, 55 for the key rate of stocks plus 50 cents for the special risks of retail dry goods.

Now take a further case and suppose that the building contains more than one class of goods. Then before rating the goods individually we must add to the key rate for stocks the amount of the highest

occupancy rate charged on any of these goods, that is to say, the amount by which the presence of these goods increases the risk of the building and of all stocks contained therein.

Suppose that wholesale drugs with compounding appliances are also in the building, then they are taken as increasing the general risk by 100 cents, and we have to add this 100 cents to the key rate of 55 cents for stocks in order to get the base rate for charging premiums on the whole stock.

The key rate would in this instance be 155 cents. Now the *individual* risk of retail dry goods is taken as above at 50 cents and that of wholesale drugs at 85 cents—this charge for susceptibility to damage is distinct from and in addition to the general risk increase of 100 cents on the building and on all stocks within it.

We should therefore get the total drug rate at 155 cents plus 85 cents or 240 cents, and the total rate for retail dry goods at 155 cents plus 50 or 205 cents. The difference between these total rates on wholesale drugs and on retail dry goods would thus be 35 cents or precisely the same as the difference between 85 and 50 cents, the amounts at which their individual susceptibility to damage was rated.

The *Occupied Building Rate* would be 65 cents (the key rate for an unoccupied building), plus 100, the rate for the increase of risk due to the presence of the wholesale drugs, or a total of 165 cents.

The schedule rates are based on a ratio of claims to premiums of 55 per cent. which, with an expense

rate of 35 per cent., would show a net profit of 10 per cent. of the premiums per annum.

All these considerations for rating stocks individually are quite outside the purview of the British tariffs, where all are rated in accordance with the risks incurred by the worst. I wish that I was able to set up a table showing an example of rating by a British tariff, but as the tariffs in my possession are given to me in confidence I am not able to do so. Enough has been said to show how large is the field for improvement in scientific methods still open to the framers of British tariffs.

The Universal Schedule Committee appointed in 1891 representatives of the principal underwriters' associations in the United States and the schedule was completed for practical purposes in 1893. It has been in successful operation in numerous towns and cities throughout the country, notably—New York, Boston, Philadelphia, Denver, Cleveland, New Orleans, Scranton, Pittsfield, Albany, San Antonio and others, and has been, in slightly changed form but with many of the important principles, incorporated in schedules and tariffs throughout the United States. It has a complicated appearance but the example which I give above will show that it is not very difficult to apply once the principles are grasped. It is stated that suggestions for improvement by those who have used it are rather in the direction of adding to its various charges and deductions than of shortening it by omitting any items. The men who have to rate by it would sooner have it longer than shorter.

It is impossible to produce actual evidence based on losses in the past for every item in the schedule, and many of them—such for instance as the measure of susceptibility to fire and water damage of various goods—were arrived at by canvassing the opinions of underwriters, merchants and manufacturers dealing with the goods themselves. It has been found that wherever the schedule has been applied in cities—and for the matter of that any intelligent schedule or tariff which aims at penalising faults of construction, occupancy, management, etc.—the fire losses have been reduced.

CHAPTER VIII.

THE CAUSES OF FIRES.

BEFORE passing on to a consideration of the financial principles of fire insurance, I should like to deal to some extent with the causes of fires both in this country and in America, and endeavour to show how profoundly the science of fire insurance is being affected by the changes in modern industrial methods. Lighting and heating methods will at once occur to any one as being most intimately connected with the fire hazard, and the introduction of electricity, both for lighting and heating as well as for power, has worked already something of a revolution. Then again the numerous chemical processes which have grown up have had an important bearing on fire insurance, and managers have been compelled to weigh most carefully their effect on fire risks.

Fire insurance affects every business and the changes and developments of every business react on fire insurance methods. The ideal fire manager would not only be an expert in finance and law but would know the details of every business more intimately than the persons who themselves conduct them. In practice it is impossible for human beings to reach the height of universal knowledge really
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necessary, and the proper rating of risks can only be arrived at by pooling the experience in the possession of fire underwriters and their companies. By means of surveyors, who have a special knowledge of the conditions of most businesses, and by the combination of experience, an equitable tariff can be arrived at. But the sole method by which any equitable system of rates can be reached is through a combination or tariff. Private underwriters and non-tariff companies through lack of sufficient *data* have no means of arriving at the proper rates for each risk and often avail themselves of the labours of the tariff companies and under-cut when they think this can safely be done.

As I have tried to point out more than once already the prevention of fires, though not the primary business of fire insurance companies, is yet a most important secondary issue and one to which their energies are properly directed. There is a small obvious fact about fires which does not receive sufficient attention. There has never yet been a fire, however great, which could not have been put out at an early stage by a bucket of water. The difficulty is so to provide that the bucket of water will be applied at the right time. The fire which destroyed Chicago is stated to have begun in a cattle shed and in a similar way the origin of most great fires can be traced to some small, apparently insignificant outbreak which taken in time would have prevented a disastrous conflagration. No cause is too insignificant to start a fire and once started a whole town may be destroyed. In this country

we rarely experience the devastating conflagrations which are common enough in the United States and in Canada, but even here we have had such outbreaks as the Tooley Street fire and recently the Cripplegate fire, in which the loss has run into a million or more of pounds sterling.

A high insurance authority declares that more than 60 per cent. of the fires which occur arise from preventable causes, and no man can say that his premises are free from the risk of fire however much he may have done towards the exclusion of dangerous lights and heating apparatus. There are scores of ways in which fires may occur apart from human agency, and the public are as a whole profoundly ignorant of the number of ways in which fires may break out. Mr. Moore, a very high authority, states in his work, "Fire Insurance and How to Build," that he has kept for many years a careful record of fires the causes of which were ascertained by adjusters after a careful consideration of all the facts while on the ground. On the business other than farm insurances the fires attributed to unknown causes were about 20 per cent. of the whole number. Exposures to fire risks outside caused about 20 per cent., lightning to buildings 2 per cent., incendiarism internal 4 per cent. and incendiarism external 9 per cent. I believe that the risk from incendiaries is much greater in America, to which this experience relates, than in Great Britain. The remaining causes, 44 per cent., were either directly or indirectly attributed to carelessness. They were matches, smoking, swinging

gas jets and other lighting defects, leaking gas pipes, lamps and stoves, fireplaces, furnaces and other heating apparatus, dryrooms, sparks from locomotives, chimneys, overheating of ashes, spontaneous combustion, explosions, sunlight through glass, rats and mice, friction, gas engines and conflagration. Conflagrations caused from 6 to 10 per cent. of all the losses. While some of these causes are within the control of the occupiers of property, others are outside it altogether. These results were obtained from adjusters who are in a better position to ascertain the true cause of fires than the officials of fire brigades. Out of the total number of fires in New York City in one year nearly a third were due to carelessness with matches and a comparatively small number of these were traced to children.

HEATING.

Now let us come to detail and consider first the more obvious and general causes of fires.

Stoves, stove pipes, etc., are a fertile cause of fires unless the greatest care is taken in regard to their construction and fitting. The pipes should connect with a flue and should never pass out of a window, through the roof, or through the side of a building. Pipes which pass through a roof may not only ignite the roof at the point of exit but there is a danger of flying sparks. Chimneys and flues are also dangerous if the brick lining is not sufficiently thick or any woodwork is in direct connection with the brickwork. In the British Standard Fire-Resist-

ing Building the brickwork of flues must not be less than nine inches thick towards the interior of the building, and all furnace flues must be lined with firebrick throughout for at least twenty feet from the furnace. In the Standard Building of the American Universal Schedule walls of flues must be not less than eight inches in thickness and be lined with firebrick, well-burned clay or cast-iron. All floor timbers to be trimmed at least four inches from the outside of the flue.

The risks of stoves and pipes are very fully realised and in the British tariffs it is common to bar stove pipes or to limit them to three feet in length. The important consideration is that no part of the stove or pipe should come near woodwork. Where stoves are placed on iron plates the wood flooring underneath may become carbonised, and they should always be raised on legs, fixed upon a stout flagstone and provided with a guard to prevent ashes and cinders from reaching a wood floor. The longer the stove pipe is the more dangerous it is since there is more opportunity for defects in joints, etc., to develop and more piping to come near combustible materials.

LIGHTING.

Oil, gas and electricity as illuminants have all been the causes of fires in varying degrees. The danger of the cheap low-flash oil in use to a large extent in this country is very great, and a large number of fires in important cities is annually traced to its

use. These fires have often caused much loss of life, and it should be a serious question for the legislature whether the flash-point of common oil—petroleum—should not be raised. In Great Britain the minimum flash-point is 73 degrees Fahrenheit, and in the United States, the source of most of the cheap dangerous oil used here, the minimum allowed is 110 degrees and in some States as much as 120 degrees. Since the safer oil was insisted upon in America the number of fires due to oil has greatly lessened. Of course the number of fires traced to oil would naturally fall off in the course of time owing to the manner in which this method of lighting is being supplanted by gas and electricity, but in the opinion of fire insurance authorities in America there has been a marked reduction since the safer oils of the Standard Oil Company have been made use of. The statistics of 34,000 fires in America show that less than 6 per cent. of the number and 3 per cent. of the money lost were due to petroleum oil lamps. The storage of oil, whether for illuminating or power purposes, is regulated in this country by statute and not more than a small quantity can be kept without a licence. The fumes given off by the lighter qualities, especially by the petrol which is used in motor cars, mix with air and are highly explosive so that elaborate precautions have to be taken in their storage. The rooms in which such oils are kept should always be outside ordinary buildings and never under them so that any fire or explosion may be rapidly isolated. In the shops

tariff in force in England and Wales warranties are inserted dealing with petroleum or other mineral oils kept for sale, and where there is no such warranty the rates of premium largely increase.

Coal gas is safer than petroleum, but with this illuminant there is a constant risk of leakage from faulty pipes as well as from taps, and the gas mingled with air makes an explosive mixture. In private dwelling-houses the risk may not be great, and in this country it is the custom to include the danger of the explosion of coal gas among the ordinary fire perils covered by the policy. Movable gas brackets have caused fire through being swung up against woodwork and through being too near ceilings. They should be protected by metal or glass shades and be secured so that they cannot come into contact with woodwork. Lights in shop windows are a common cause of fires, and the provision of glass globes and wire netting is essential in order that light articles such as ribbons shall not be blown into the flame by draughts. The method of placing lights above goods, especially outside windows, and throwing the light down by reflectors is the safest.

Gas lights and oil lights too should not be nearer to a ceiling than thirty-six inches and should be protected by suspended shades. Metal nailed against woodwork may merely conceal charring without preventing it. A case was recorded in London in which a gas light set fire to a ceiling twenty-eight and a half inches above it. While precautions of the kind indicated are of course most necessary in

manufactories and warehouses, it should not be lost sight of that many private house fires might be prevented by greater care in regard to oil and gas fittings. This is a matter over which fire insurance companies can have little control, and it really rests with the public who err as much through ignorance as culpable carelessness.

ELECTRICITY.

While the introduction of electricity has caused a decline in the fires caused by the exposed lights of gas or oil burners, it has introduced dangers of its own which are fully realised by fire managers of experience. It has been described as so much liquid fire running through a building by night and day. Properly applied it can be made into the safest kind of illuminant and conveyer of power. Its good qualities are numerous. It does away with naked lights and the use of matches—a most fertile cause of fires. In premises where it is exclusively used it prevents the risk of explosion through the escape of coal gas or oil fumes. But when these good qualities are allowed for, it must be admitted that defective installations of electricity have caused numberless fires both here and in America, perhaps more in America than here. All electrical apparatus has a limited capacity for consuming or conveying a current. If, owing to accident, wear and tear, improper use or gradual failure more current passes through a wire or apparatus than it is calculated to bear, undue heating occurs, and if there is no protective device fire

results. Quite recently the Town Hall at Birkenhead suffered from a very bad fire—the loss was, I believe, £40,000—simply through the burning of a wire which communicated the fire to the wooden covering and thence to the building. The risk of fires through the overheating of any part of an electric apparatus is prevented by means of a “fuse” which is in the path of the current. When the fuse is brought into operation the current is cut off. The kind of fuse in ordinary use depends upon the burning out of the circuit. The fuse wire is attached to a bridge of porcelain or some incombustible material. It often happens that a fire is started elsewhere while a fuse is acting owing to leakage or escape of electricity through some combustible channel. In all good apparatus when escape might take place in this manner there is some incombustible cover. The installation of electricity in this country is watched by the fire insurance companies, and they require their surveyors to have regard to certain measures of precaution in the matter of insulation of wires and the provision of effective “fuses”. Electrical experts attach more importance to safety fuses than to insulation ; the latter is important but not to the same extent as the former. The principle of the fuse is the introduction of a piece of apparatus which is of less carrying capacity than the wire, so that it will fuse or burn out at a safe place, thus cutting off the current whenever the current passing through it is in excess of the safe-carrying capacity of the wire. While safety fuses do much to prevent fires their efficiency depends upon frequent

inspection both of the wire and of the fuse, more especially of the fuse. The proper insulating of electric wires and the provision of safety fuses are subjects which the fire insurance surveyor must have constantly before him, and it is no less important that all those connected with the business should have a fair grasp of the general principles.

It is not always realised how hot the glowing carbon within an electric incandescent lamp really is, and this heat is communicated to the glass globe. An old lamp will give out more heat than a new one owing to the greater resisting power of the worn carbon. Wherever such incandescent lamps may come into contact with merchandise they should be protected by wire cages. Paper shades should never be used since they gradually char and if the paper came in contact with a hot socket it might ignite and fall. Nevertheless I have frequently seen in the offices of fire insurance companies paper screens of obviously amateur construction in use.

The material used for insulating electric wires—that is the covering of the wires which confines the electric current—is of high importance from the fire insurance point of view. The best insulator is considered to be vulcanised india-rubber, though it has not yet been proved how far this material is affected by age. Paper, jute and other fibrous substances saturated with resin oil are now largely used but for indoor wiring they are considered to be much inferior to india-rubber. It is regarded as important to remember that the removal of insulating protection

is always possible by abrasion, etc., and to treat wires when fixing as if they were bare. I mean they should be fixed so as to be clear of wood and never be within one inch of gas, water or other pipes. This is specially important where the wires are exposed to risk of damp. Electro-motors, by constantly giving off sparks from the brushes, are a danger in buildings where there is combustible material or dust, such as in cotton mills, and in the British tariffs a considerable addition is made in such buildings for the use of electro-motors.

CARELESSNESS AND DIRT.

But the fire dangers which arise from lighting and heating are small compared with those which are permanently due to want of cleanliness and care. Rubbish allowed to collect in cellars and other out of the way places has caused countless fires. All rubbish is dangerous and the sweepings of floors are specially so, more particularly where sawdust is mixed with the rubbish as in grocery and drug stores. The dangers arising from want of cleanliness should be kept constantly before the public by insurance agents and others. Matches, too, are a prolific source of fire. Safety matches are comparatively innocuous, but ordinary phosphorus "strike-anywhere" matches frequently get mixed with rubbish and become ignited by friction or by rats, mice and cockroaches. Many instances have been known of this danger, and there is little doubt that many fires of which the source is officially "un-

known" may properly be ascribed to matches. For instance, one evening a hotel-keeper swept the rubbish from the smoking-room out of the back door and on to a heap of shavings, etc., in a wood shed. Five minutes after he happened to return and found the shavings on fire. A match had been among the rubbish and this was ignited by the friction of the broom. Had not the man in this case discovered the fire the hotel would probably have been burnt and the cause unknown. Cockroaches have actually been seen to ignite matches by biting them and burned rats and mice have been found in the same box with burned papers. Matches placed in a drawer may be ignited by the closing of the drawer and a fire break out from this cause long after a building has been left for the night.

A fire which cost the insurance companies £100,000 was caused by the proprietor of a warehouse lighting a gas jet with a piece of paper. He threw the paper down and it set light to the premises. In this case the carelessness was all the more culpable for it was one of the proprietor's own rules in this warehouse that tapers only should be used for lighting gas.

Numerous other instances might be given of how carelessness or want of cleanliness may cause fires. Take the gratings beside street pavements which cover up small areas. Wastepaper, dried leaves and other combustible materials collect in these areas and matches or cigar ends are frequently dropped through the gratings by passers-by. Numerous fires break out in this way.

Reading in bed at night with a candle or lamp beside the bed is so obvious a danger both to the house and the life of the reader that one wonders why anybody cares to take the risk. Yet I am prepared to stake long odds that many insurance officials have done it more than once in spite of their fire insurance training.

A common domestic practice among careful housekeepers consists of raking out fireplaces and stoves at night and leaving the ashes on the hearth. This is an example of care in the wrong place. It is much safer to arrange the burnt or half-burnt materials in the grate so that they cannot fall out. Screens covered with clothes are frequently placed near stoves or kitchen fireplaces to dry where a draught from an open door or window would throw them on to the fire. Many people, intelligent people too, will go to bed and leave a screen full of clothes before a fire all night.

While insurance officials cannot too persistently keep before their connections the dangers which must arise from carelessness they have little or no power to see that their directions are heeded. They can only keep pegging away through their agents, inspectors and surveyors in the hope that some good result may follow.

SPONTANEOUS COMBUSTION.

In ordinary policy conditions the risks of spontaneous combustion are excluded to a limited extent from the protection of a fire insurance policy. The

words used exclude "loss or damage to property occasioned by or happening through its own spontaneous fermentation or heating or by or through its undergoing any heating or drying process". As I have pointed out in a previous chapter this clause does not exclude the damage caused by spontaneous combustion except as regards the actual property so heated. All the consequential damage to other property would be paid for. It is also one thing to bar spontaneous combustion as a cause of fires and quite another thing to prove that a particular fire arose from this cause. It is probable that many more fires are due to spontaneous heating than are ever traced to this cause since the substances which cause the ignition are rapidly consumed and once gone there is no evidence of the cause of the outbreak. It follows that spontaneous combustion can only be proved when the cause is detected at the very beginning of a fire. At one time spontaneous combustion was thought to be rare, but it has been ascertained by chemical experts that the ignition of substances without external heat and merely by chemical action within themselves is comparatively common.

One of the most constant features of all chemical action is the production of heat, and where substances have an affinity for oxygen and rapidly absorb it from the atmosphere sufficient heat may be raised as to cause combustion. The rapid drying of vegetable oils like linseed, especially when mixed with fibrous material, will cause an absorption of oxygen up to the point of actual fire. In the same way moist

charcoal when drying will ignite. The substances which absorb oxygen most freely are the most dangerous. The vegetable oils to which this description applies are linseed, cotton seed, palm oil, almond, rape seed and so on. They are not dangerous in barrels or cans but only when mixed with fibrous substances, and more particularly when covered up so as to confine the heat. Cotton waste saturated with linseed oil will ignite in from two to ten hours, cotton waste mixed with rape seed or olive oils will take about six hours to catch fire and sawdust mixed with linseed oil will "combust" in about the same time. Petroleum is not dangerous in this way, though of course it has its own special hazards.

Since oily rags are used every day for the cleaning of machinery and are frequently thrown into waste heaps the risk of a fire from their spontaneous combustion cannot be overrated. Wet cotton, damp oatmeal and most vegetable substances when packed in a confined space are liable to ferment and ignite. Fires on board ship often occur from spontaneous combustion since the confined holds assist the natural fermentation. Wet iron filings generate heat and so does all rusting iron. Very fine fragments of iron and steel will oxidise so quickly as to become red hot, and it has been claimed that some fires caused by steam pipes may be due to iron rust. The iron scraps and filings in workshops, all more or less oily, are specially likely to cause heat and the mixture with them of sawdust will make a fine flammable compound. Alternate wetting and drying, as in the

case of heaps of such rubbish exposed to the weather, is regarded as most favourable for combustion.

All finely divided substances such as cotton, saw-dust, wool, hemp, rags, floor-sweepings, etc., when saturated with vegetable oils are liable to spontaneous combustion. A curious case is given in "Fire Insurance and How to Build," taken from an American newspaper and vouched for by medical evidence. A child suffered from a burn on the abdomen and the wounds were dressed with subnitrate of bismuth, linseed oil and cotton wool and the child covered closely by the bedclothes. The child complained of pain all night and in the morning smoke was seen arising from the bed. The dressing was not removed till later when the child was dying. It is stated that the cotton wool was burned almost entirely up and the second fire could only have been caused by the spontaneous combustion of the linseed oil. The combustion was assisted by the warmth of the body and the close confinement of the bed-clothes. The conditions in this case were precisely those most favourable to the spontaneous combustion of cotton fibre and linseed oil.

In order that fires from spontaneous combustion may be avoided all dirty or greasy cotton or woollen waste should be removed to a building set aside for the purpose and never left in a mill all night. Whenever any painting is done on premises there are sure to be numerous pieces of cotton rag soaked in linseed oil used by the painters, and these should always be carefully removed from a building.

Among other substances liable to ignite spontaneously are lampblack, oiled clothing, wet hemp ropes and mats, phosphorus, bituminous coal or charcoal in large heaps, moist hay and generally almost any moist vegetable substance or a mixture of vegetable fibre and oily substances.

The oiled clothing common in marine clothing stores is prepared usually with linseed oil and is dangerous if piled upon shelves. It should be hung up and exposed to free currents of air by which the heat is carried away.

Powdered charcoal in heaps will ignite spontaneously. A large quantity is almost certain to ignite and small quantities may do so if left for some days.

CHEMICAL SUBSTANCES.

Apart from the risks attending the manufacture and storage of chemicals, which are tolerably well known and dealt with in tariffs, there are many dangers to ordinary buildings which arise out of the tendency of various chemical substances to generate heat. Chlorine is a substance found in a large number of familiar compounds such as chlorate of potash, chloride of lime, chloride of magnesia and so on. Chlorine has a strong affinity for hydrogen, and will seize upon it in many of its liquid and solid combinations such as volatile oils and cotton and flax. It will ignite spontaneously by mixture with many substances and even with some metals when finely powdered, such as antimony. Chloride of potash

was at one time considered a comparatively harmless substance, but it lost this good character after a terrible fire at the United Alkali Company's works at Widnes. It is not of itself combustible but it contains so much oxygen—my readers may remember the school experiments in which oxygen is manufactured from chlorate of potash—that it forms with sulphur, carbon and other bodies explosive mixtures. When it is heated oxygen is given off so that a fire in it or near it produces just that oxygen which is needed for combustion. Acids also act powerfully upon it and produce great heat. Nitrate of soda, the well-known "Nitrate," is usually looked upon as harmless, but it can become dangerous when coal dust or coke is mixed with it. Some acids also will produce combustion in it.

Lampblack is made from burning resin, bone oil or coal tar. Much of the oil vapour is present in the smoke from which the lampblack is made and even a small quantity of oil is sufficient to cause combustion. It becomes still more dangerous when any oil, especially linseed, is mixed with it. It is a substance which is commonly found near oils, as in paint shops.

It is not possible to do more than hint at some of the dangers arising from chemical action among substances which are generally reckoned as "chemicals". The subject is well worth special study.

VEGETABLE SUBSTANCES.

Moist hay when stored away, say, in a stack will ferment and get hot sometimes to the extent of

burning down the stack. A similar process will cause fires in many other vegetable substances. Tarred felt and moist hemp have been known to take fire, spontaneously. Even roasted coffee has taken fire sometimes, and it would appear that the roasting increases its tendency to ferment.

Wood which has been exposed to heat for a long time will get in such a condition that it either ignites spontaneously or with a very slight application of a greater heat. It is for this reason that wood should not be in contact with pipes containing hot water or steam since it will then become extraordinarily combustible. This curious fact shows the danger of using wood in drying-rooms where the temperature is maintained at a high level. I remember while I was at Cambridge the wooden side of my mantelpiece took fire suddenly and the flame rushed up several feet in a few seconds. Owing to the heat of the fire over a long period the wood had become as combustible as tinder.

While the risks of spontaneous combustion are more noticeable in manufactories, mills, shops and so on than in private dwelling-houses yet they are by no means absent anywhere. Mr Moore gives some interesting examples. In one case a ball made by children out of woollen yarn, which they had oiled to make elastic and pliable and had then covered with leather, was found to have ignited spontaneously and was burned to ashes. In one house a mattress took fire. It was found that this mattress instead of being stuffed with hair was made of such materials

as tow, flax and other waste. A lounge stuffed in the same manner took fire. Numerous cases have occurred in which fires have originated in the greasy overalls of painters left in houses overnight. In the case of a new house a fire was started by a heap of oilcloth clippings left in a corner. Oilcloth is made with linseed oil. Any sweepings, especially those in places where vegetable oil is kept, are liable to catch fire, and the danger is greater if the accumulations are allowed to become considerable and get covered up. Generally speaking there is little risk if the air has free access since the heat generated is rapidly carried away: confinement by keeping in the heat allows it to rise to a temperature which causes ignition. All sweepings of factories, drug stores, grocery stores, machine shops, etc., should always be placed in a metal receptacle. The metal will not only prevent a fire from spreading but, being a good conductor, will conduct away the heat which is generated by spontaneous combustion. In any record of fires one will not find many outbreaks attributed to this cause, for the simple reason which I mentioned a while ago. But it is certain that as a cause of fires spontaneous combustion is of the highest importance, and very many of the fires of which the causes are unknown may safely be attributed to it. No precautions against fire can be considered effective until every care has been exercised in dealing with those substances which have a dangerous tendency to ignite spontaneously.

It is of interest to notice how some of the modern methods of heating and lighting, which would appear

to a superficial observer to remove the danger of fire, manage to develop grave fire risks of their own. I have already given the instance of electricity, and another instance is that of pipes used for heating by means of steam or hot air. In fact, it is seriously contended in some quarters that stoves with their obvious dangers are really safer than steam pipes since every precaution is readily taken by users of stoves while it is difficult to persuade people to believe in the risks of steam pipes. The heat given out by hot pipes in contact with wood, wool, cotton, sawdust, charcoal and other combustible substances will gradually increase their liability to ignite until they may actually take fire spontaneously. I mentioned wood just now, and what is true of wood is true of these other substances. It is naturally difficult to trace a fire unquestionably to hot pipes since the evidence is quickly destroyed, but many undoubted cases have arisen in regard to all the substances which I have mentioned. Steam pipes for power purposes are frequently packed to prevent the escape of heat and it has been proved that charcoal, sawdust and similar substances are not safe for this purpose. A very curious case occurred in America. A pine board had been placed in a wool-drying room a few inches above steam pipes to prevent the wool from falling upon them. This precaution was actually the cause of a costly fire since the heat from the pipes caused resin to ooze out of the knots in the pine wood and fall upon the pipes, resulting in combustion. This example would suggest the need for making sure that steam pipes

are well removed from wood. Charcoal if moistened and then subjected to a low-drying heat will ignite at a temperature below that of boiling water. The heat of steam pipes will gradually reduce wood to the condition of charcoal, and if any moistening then occurs, as may well happen, all the conditions are present for combustion. Steam pipes have been known to set fire to wood at a distance of 300 feet from the boiler. The greatest danger arises from steam and hot-air pipes when they pass under floors, behind partitions or in any concealed space. Not only does combustible dust collect about them but rats and mice build their nests near them on account of the warmth, and the inflammable and oily rubbish used by these creatures for nests is thus brought into close contact with the pipes. The safest place for pipes is probably near the ceiling, not too near, where stock and other inflammable substances cannot come in contact with them. It was known in London fifty years ago that hot-air pipes would cause fires, and experience since then has only added confirmation. The dangers of steam and hot-air pipes seem to have attracted more attention in America than in this country, but there can be no doubt that many fires have been directly traced to them.

CHAPTER IX.

FINANCE.

THE finance of fire insurance is not a subject with which most insurance officials have much to do ; it is a matter for the managers and directors of insurance companies. But as success in fire insurance must over a term of years depend almost wholly on attention to sound principles of finance it is most important that all those connected with the business should have as clear a grasp of them as possible.

Sound finance is, of course, based upon a sound system of accounts ; without full and accurate accounts no company can know precisely how it stands. But I shall not deal with the subject of accounts. I shall assume that a system of accounts is in force which enables the principal officers to keep in close touch with the financial working of their companies. Adequate rates of premium are at the basis of the business and I have indicated how these are determined. A fire office receives its premium income from a vast number of sources and most of these sources are themselves small. On the other hand, its principal outgoings are in comparatively large sums for fire claims, and if a profit is to be made it is at least as important to limit as far as possible the

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amounts payable in claims as it is to keep up the rates of premiums. Excessive claims are avoided by carefully limiting the "lines" of individual companies on risks—the bigger the risk the smaller the line—and by distributing the liabilities of a company over the widest possible area. The *maximum* lines held by companies on single risks vary according to the size of the companies. A strong office will hold, say, £10,000 on a large private house in a town and £3,000 on a cotton or woollen mill. The limitation of lines on buildings and "blocks" of buildings, and the provision for reinsurance facilities with other companies, so that an excessive line is not run for a single night, and the sifting out of unprofitable risks before they can do much harm, are a severe test of competence in insurance management. There are some companies who go on year after year making profits while other companies fluctuate very much, making large profits one year and perhaps losing money in the next. The managers of the first class of companies show by the severe test of actual results that their system of limiting lines and reinsuring or refusing excessive hazards is a sound one, and those managers who show widely varying results according as a fire insurance year is "good" or "bad" are clearly to a much greater extent than the former class dependent on luck. Strictly speaking there should be no such thing as luck in fire insurance, either good or bad. The function of a competent manager is to eliminate luck from his operations and the fact that few men succeed in

really eliminating it simply shows that the first-class fire insurance manager is a very rare thing. In a good fire insurance year almost any one can make money but in a bad year profits are very difficult to make, and it is bad years which form the test of the highest competence. Success does not depend upon the piling up of premiums—that is comparatively easy—it consists in limiting and avoiding losses. That is the first point to bear in mind. We are living in an age in which merit is erroneously attached to mere size. The hunger for size is a disease, and many of the amalgamations which we have seen—some of them on terms which must strike an observer as preposterous—are merely symptoms of disease and not of competent management. The theory which lies at the root of the desire for size is almost always fallacious. It is urged that a big company can conduct its operations at less relative cost than a small one, but how often do we see a big company really showing a lower rate of expenses than a small one? As a matter of fact, the expenses of conducting fire insurance, in spite of the alleged benefits of expansion and of amalgamations, show a constant tendency to rise, and an examination of fire insurance accounts over a considerable period indicates that the advance in expenses is very large indeed. Since next to the item of fire claims the most important outgo consists of expenses and commission, the item of expenses needs as careful watching and curtailing as does that of claims. Let me give an example of this.

EXPENSES OF ADMINISTRATION.

For the ten years to 1895 the total expenses and commission of British fire insurance companies averaged 31.6 per cent. of the premiums. Now take a jump to the last two years 1901 and 1902. In those years the proportion of expenses and commission to premiums was 34.03 per cent. and 34.46 per cent. respectively, showing an advance in expenses and commission in the latter year as compared with 1886-1895 of nearly 3 per cent. of the premiums. When we reflect upon the small margin of profit permitted to fire insurance operations over a period of years (see Chapter II.), we see what a great effect may be caused by an advance in expenses. For example, the net profit for the ten years to 1895, after allowing for the increase in liabilities, was only 6.5 per cent. of the premiums, and if the expenses during those ten years had been at the same rate as for 1902 the net profit would have been reduced to 3.6 per cent. of the premiums, a profit which can hardly be described as sufficient when the enormous risks of the business are taken into account. Indeed the risks are so great and the margin of profit so small that it is rather a remarkable thing that fire insurance is capable of being conducted so as to produce a trading profit at all. That it does so at all is due to the fact that insurance companies like banks are trading not on their own capital but on other people's money. The profit is earned on the whole turnover, not on the comparatively small paid-up capital, and a very minute

percentage of profit on the large turnover is, together with the interest on the funds accumulated during past generations, able to produce a sufficient amount to yield high nominal dividends on the small capital. But it cannot be too clearly understood that it is the interest on the funds rather than actual fire insurance earnings which in most cases enables these dividends to be paid.

GOOD AND BAD YEARS.

The margin of actual profit is so small that in a bad year—a year which produces an amount of fire claims above the average—it has a way of disappearing altogether. And this risk of the disappearance of profits is greater now that the proportion of expenses and commission to premiums has advanced. In 1901, which was a most unfavourable year in the United States and Canada, where the British offices conduct large operations, the fire claims amounted to 63·69 per cent. of the premiums. The expenses and commission were 34·03 per cent. and the nominal gross surplus of claims and expenses over premiums was 2·28 per cent., an amount which is poor enough as it stands. But as a matter of fact not even this beggarly sum was profit since the increase in liabilities must be allowed for before we can call any surplus a profit. I reckon this increase in the liabilities at the end of 1901 at 3·1 per cent. of the premiums, a result which brings out a net loss on the year of ·82 per cent. of the premiums or about £160,000. As the receipts from interest were not

in 1901 sufficient to provide the customary dividends—some reductions were made but not many—the balance had to be made up out of the reserves. That is to say, the proper provision for increased liabilities was not in all cases made, and the money which according to strict finance ought to have gone to meet this increase in liabilities was paid in dividends.

Now that would be an example of very bad finance if it were not quite an exception and due to the unusual fire losses of the year. It would be manifestly wrong to go on for years paying dividends at the expense of reserves, and this is a practice which has in the past brought insurance companies to something approaching ruin. But to maintain dividends in, say, one exceptional year by a draft on reserves is not necessarily bad finance if the condition is really exceptional and one not affecting to any serious extent the position of a company. But, generally speaking, dividends should be quite a secondary consideration and the maintenance of reserves one of primary importance.

I have given an example from a bad fire year and will now give one from a good year, namely, 1902. In that year the fire claims were 52·2 per cent. of the premiums as compared with 63·69 per cent. in 1901 and the expenses and commission amounted to 34·46 per cent. There was thus a gross surplus of premiums over claims and expenses of 13·34 per cent. as against 2·28 per cent. in 1901. The amount of this gross surplus was £2,918,000. The interest

receipts were £1,344,000. The total amount paid in dividends was £1,950,000, of which you will observe £1,344,000 was provided out of interest on the funds and only £606,000 came out of the gross surplus of £2,918,000. From this surplus as much as £1,860,000 was added to the permanent fire funds, an addition which was far in excess of the amount required to meet the increased liabilities. This year, 1902, was a good year and the profits, instead of being frittered away in paying increased dividends, were very properly to a large extent carried to reserve, thus more than making up for the losses of 1901 and leaving the companies as a whole much stronger than they were in 1900. That was good finance, namely, taking advantage of exceptional profits in order to strengthen resources instead of paying them away in dividends.

THE GROSS SURPLUS.

When one comes to think of it, the gross surplus each year, when there is one, of premiums over expenses and claims has to carry the whole burden of financing fire insurance companies. It is the one source which provides assets to meet an increase in liabilities, which provides permanent reserves and which makes up deficiencies in the dividend fund after receipts from interest have been taken credit for. These same receipts from interest which form the principal source of the shareholder's dividends are due to the accumulation of reserves in the past

invested in interest-bearing securities. The surplus of premiums over claims and expenses, which taking one year with another is less than 8 per cent. of the premiums, has to provide for two kinds of reserves, those for the increase in current liabilities and in the permanent fire funds, and also a credit balance for profit and loss—that is for shareholders' dividends. There is probably no business of the magnitude of fire insurance, certainly no business which is so difficult and risky, which is conducted on such a small margin between a surplus or deficit on the operations.

THE WORK OF FIRE RESERVES.

I should like my readers to consider the reserves of fire insurance companies before we pass on to examine their finances more closely. The fire reserves are, together with the capital (paid and uncalled), absolutely the backbone of the business. They form the security on which the public rely when they pay their premiums. Upon these reserves depends the ability of a company to meet its claims, and without adequate reserves fire insurance is little more than a gamble. Most of the fire insurance companies have adequate reserves though, as I shall show, they have relatively to the business been declining during the past eighteen years or so, and in some cases where a company's reserves have become perilously scanty recourse has been had to amalgamation with a more powerful office. Amalgamation in a case of this

kind is vastly preferable to bankruptcy, which is a much worse and more momentous event in the case of an insurance company than of an ordinary trading concern. I know at present of only one instance in which a fire insurance company—it is not English or Scottish—is trading without fire funds at all and which has no provision even for current liabilities. The sole security in this instance is the uncalled capital. This company forms a striking exception to the general rule of insurance security. The financial position of nearly all the well-known British companies is unquestionably sound, though in some instances their financial methods are open to criticism. But taking fire insurance companies as a class they will compare very favourably indeed with banks or any other financial institutions.

The reserves of a fire office which, as I say, are built up out of the annual surpluses of premiums over claims and expenses, have a great deal of work to do. In the first place they provide for the liabilities on current policies, for the unexpired risk that is on the ordinary business. I shall go into this subject later in some detail. For the moment it is enough to say that at the end of any year from one-third to about 45 per cent. of the premium income is unearned and has to be set aside. The premiums have been received in advance, but the risks to which they relate have not expired. After providing for the liabilities on current risks the reserves have to provide for exceptional losses beyond the ordinary expectation. The great hold

which British offices have secured in the United States is largely due to the manner in which they provided almost at a day's notice for the immense exceptional losses in the Chicago and Boston fires. Without large reserves such losses could not have been met. In the same way the British companies could not have met their losses of some £1,800,000 in the recent Baltimore fire without loss of credit had not the reserves been ample. Then the reserves have to provide for a dividend equalisation fund and supply the deficiencies in earnings in bad years so that, as far as possible, dividends may be maintained. It adds to the good repute of a company in financial circles if the dividends are maintained steadily and do not jump up and down. Then, lastly, the invested reserves are the source from which come the interest receipts by means of which so large a part of the dividends is annually paid. We must therefore regard the reserves of a fire office as fulfilling four distinct functions: (1) a reserve for current liabilities; (2) a permanent reserve for exceptional losses; (3) a dividend equalisation fund, and (4) the source, when invested, from which the interest is derived which goes a long way towards meeting the dividends. This fourth function is also fulfilled by the paid-up invested capital and this capital also adds to the general security of a fire office. But as it is usually small in amount as compared with the fire reserves these reserves have to provide the greater part of insurance security.

DIVISION INTO SPECIFIC RESERVES.

The different functions which have to be fulfilled by a fire insurance company's reserves make it not only desirable but highly important that they should be divided up and not simply thrown into the accounts in one sum. The full division would be into three parts: (1) reserve for unexpired risks; (2) permanent reserve fund and (3) dividend reserve or shareholders' reserve fund.

This third fund is not absolutely necessary as the free balance of profit and loss account may fill its place, but a distinct provision of the kind tends to greater financial clearness. The division of reserves into two parts, namely, provision for unexpired risks and for a permanent reserve fund, is essential if sound financial principles are to be followed. Yet it is to be regretted that in many important cases this division is not made. Rather more than half the fire insurance companies, and some of the biggest of them, simply lump all their reserves together and do not specify that part which is set aside for unexpired risks. I have before me many examples in which such a course has led to the serious depletion of reserves.

My readers will see that if a certain proportion of the premium income—say, for the moment, 40 per cent.—is set aside as a definite provision for unexpired risks then this special reserve must be maintained each year or public attention will be called to the fact that it has not been maintained.

If the premium income increases then this reserve must be increased with it and provision made for the increase out of any trading surplus before any sums can be carried to profit and loss and become available for dividends. If a definite reserve for unexpired risks is not set up the temptation in a bad year to starve the reserves and carry the whole nominal surplus to profit and loss is very great and has not always been resisted. In 1901, a very bad year, many companies of high class did this, and however much such a course may be justified on the ground of expediency it is certainly bad finance.

FIRE INSURANCE ACCOUNTS.

Now let us turn to the published accounts of fire insurance companies and try to illustrate the principles which I have endeavoured to indicate.

In this country there is no obligation upon a purely fire insurance company to publish accounts in any particular form, or indeed to publish them at all. But by the Life Assurance Companies Act of 1870 those life offices which have fire, marine or other departments are required to give certain particulars of their business. They may give more but a certain minimum is laid down. As many of the leading fire insurance companies publish accounts under this Act other purely fire companies have followed, and now the publication of fire insurance accounts is general. The precise forms vary a good deal. Some are fairly full, others are capable of

large improvement. They all have one big blot and that is the lumping together of all the business in whatever part of the world it may have been conducted. In the United States the fire offices are required to furnish particulars on prescribed forms of their operations not only over the whole country but also in many individual States. In Canada accounts have to be filed on specified forms of Canadian business. It would be most instructive if fire insurance companies here published separate accounts of their British and foreign business, though there is no prospect of their doing so voluntarily. There is also no demand whatever for legislation on the matter so we shall probably have to be content to do without information as to the home business of all the companies.

Consider the following examples of accounts for 1901 of two important companies, one of which makes explicit provision for unexpired risks and the other which does not. It will then be seen how the presence of such an explicit provision tended to good finance in the first case and its absence to indifferent finance in the other case:—

The nominal trading loss or excess of fire claims and expenses over premiums was £51,958, but the real net loss was £51,958 plus increase in the liabilities for unexpired risks ; that is £51,958 + £30,784 = £82,742 (as in above revenue account).

By making proper provision for its increase in liabilities Company A carried the whole deficit of £82,742 to profit and loss. In other words the deficit was provided for out of the free balance of profit and loss and the necessary provision for liabilities was accordingly made in spite of the losses of the year.

Now take Company B which does not set up each year a definite provision for liabilities under unexpired risks :—

The nominal trading surplus was £163,365, but as the increase in liabilities for unexpired risks was £172,569 there was really a net loss on the year of £9,204.

The sum of £163,365 carried to profit and loss account was therefore not earned, and the reserves were starved to the extent of £172,569, the provision which should have been made for the increase in the company's liabilities.

These examples, both taken from the accounts of high-class companies and both for the same year (1901), will show how the provision of a reserve for unexpired risks compels a company to provide first for its liabilities, and how the profit and loss account or the dividend fund comes second. In the first case the balance of profit and loss was depleted both by the nominal trading loss of the year and also by the increased provision for the liabilities. In the second case the profit and loss account received a sum as profit which had not been in any respect earned. The great value of an explicit reserve for unexpired risks is that it compels the provisions for liabilities in bad years as well as in good ones and removes one of the greatest dangers fire insurance companies suffer from, namely, the depletion in bad times of their reserves in order to pay dividends. I have here an example of a company—now amalgamated with another office—which went rapidly from bad to worse owing to the absence of a reserve for unexpired risks and a desire to go on paying dividends to its shareholders. If it had stopped dividends for

half a dozen years and devoted every penny to reserves its history would in all probability have been quite different.

COMPANY C.

	Annual premiums.	Premium reserve for unexpired risks.	Fire reserve.	Percentage of reserve to premium income.	
1888	592,148	—	380,000	64.1	
1889	627,495	—	380,000	60.5	
1890	679,703	—	400,000	58.9	
1891	905,239	—	480,000	53	
1892	922,848	—	350,000	37.9	
1893	741,112	—	168,000	22.6	
1894	725,212	—	218,000	30	
1895	732,545	—	258,000	35.2	
1896	701,278	—	288,000	41	
1897	700,832	—	318,000	45.3	
1898	705,788	—	318,000	45	
1899	674,542	—	250,000	37	
1900	705,794	—	207,174	29.3	
1901	} Amalgamated with another company, March 1901.				
1902					No premium reserve.

Now turn back to the Revenue Account of Company A on page 225 and consider what the items mean. A properly drawn revenue account, as this is, covers not only the cash transactions but also those which are of the nature of assets and liabilities.

The premium income equals premiums paid and those outstanding. The amount of the outstanding premiums is seen from the assets side of the balance sheet on page 234. In the same way the interest and dividends in the profit and loss account on page 231

include outstanding interest, the amount of which is given in the balance sheet.

The claims (losses) equal claims paid and claims outstanding and the amount of those outstanding appears on the liabilities side of the balance sheet. In the same way the commission and expenses include items of expenditure incurred as well as paid.

PROFIT AND LOSS ACCOUNT (COMPANY A).

After allowing for the loss of £82,742 in the year 1901, carried to profit and loss, and taking credit for the interest and dividends received and payable, we find that the funds were depleted by £163,978 owing to the trading loss of the year and the excess of dividends paid to shareholders over the interest received from investments. This amount was made up as follows:—

COMPANY A.

PROFIT AND LOSS ACCOUNT.

The final result of the year's operations is seen from the above account in which the credit balance of profit and loss brought forward (£549,735) is reduced by the end of the year to £404,216, a decline of £145,519. The analysis of the fire accounts which I have made shows that the trading loss of the year accounted for £82,742 and that the remainder was due to the excess of the shareholders' dividends over the earnings of the invested funds less the greater part of the profit on the life account. This is an easy example since the Revenue Account on page 225 is properly drawn so as to show the increase in liabilities for unexpired risks. But by proceeding in a precisely similar manner, however accounts are drawn, and by isolating the fire receipts and outgoings from those of interest, etc., we can always arrive at the true earnings of a fire insurance company. But it will always be necessary to have regard to the increase or decrease in premiums and to estimate the change in the reserve for unexpired risks whether the particular company under consideration does so or not.

BALANCE SHEET.

The General Balance Sheet of Company A, printed on page 234, is very fully set out and after what I have written will pretty well explain itself. On the liabilities side the principal item to receive attention is that of outstanding liabilities. Here the outstanding losses relate to fire claims; the bills payable

and sundry outstanding balances are made up of sums in course of payment for expenses and in connection with agencies. The reinsurance premiums are owing to other offices for reinsurances and have already been allowed for when the *net* premium income was arrived at. On the assets side agents' balances are funds in the hands of branch offices and agents which are in course of periodical settlement with the head office. I have already referred to the items of outstanding premiums and interest.

COMPANY A.
GENERAL BALANCE SHEET.

LIABILITIES.		ASSETS.	
£	s. d.	£	s. d.
Capital:—			
Subscribed—110,000 shares of £25 each	£2,750,000	British Government securities	672,957 7 7
Called up—£6 5s. per share	687,500	Colonial Government securities	173,020 17 1
Profit and loss	404,216 9 8	Guaranteed and other Indian railway stock	160,802 0 10
Dividends unclaimed	4,687 16 4	Guaranteed Indian railway debentures	19,900 0 0
Superannuation fund	89,607 16 5	Foreign Government and State securities	348,787 1 10
Shareholders' life and annuity profit account.	91,806 0 2	Colonial municipal securities	75,371 10 9
		Foreign municipal securities	269,596 4 7
		Railway and other debentures and debenture stocks	118,796 2 3
		Railway and other stocks and shares	163,382 2 3
		Foreign railway bonds	560,114 18 6
		Foreign railway preference shares	47,250 11 1
		Mortgages, property in United Kingdom	40,409 9 8
		Feu duties and feuing ground	13,025 12 9
		Premises in Edinburgh, London, etc., partly occupied as offices of company, and partly let	567,570 8 5
		Salvage corps premises	10,970 6 6
		Bills receivable	15,669 6 0
		Agents' balances	294,283 1 10
		Outstanding premiums	70,767 4 3
		Outstanding interest	12,318 5 3
		Cash in hand and on current account abroad	116,924 12 7
		Cash on deposit abroad	10,437 10 0
		Cash in hand and on current account at home	40,594 17 8
		Cash on deposit at home	20,000 0 0
		Due by annuity branch	8 7 5
			£3,822,857 19 1

The investments of a fire insurance company must be much more liquid than those of a life insurance office and usually yield a lower rate of interest. A life office can safely lock up its funds in long mortgages but as a fire office may be called upon to find large sums at short notice for unexpected fire damage it must not lock up its funds in securities which are not readily saleable. In the above list all the investments are readily marketable except mortgages in the United Kingdom, feu-duties, etc., and business premises or about one-sixth of the assets. That is a sound position. A comparison between the investments of first-class fire and life offices, where these are given separately, will emphasise the essential difference between the nature of the claims which the two kinds of insurance companies are called upon to provide against.



CHAPTER X.

RESERVES.

When pointing out the importance of a specific reserve for unexpired risks I laid stress on the automatic manner in which it provides for the system of reserves in proportion to liabilities. I do not want to assert that a fire insurance company which does not set up each year its liability for unexpired risks and provide for it is necessarily unsound. That would be most untrue as there are cases in which fire offices of the highest standing and the greatest strength lump all their reserves into one sum. But what I do say is this—that the provision of such a reserve removes one of the most pressing temptations which directors suffer from of starving reserves in bad years and of carrying amounts to profit and loss from revenue account which have not been earned. No nominal surplus of premiums over claims and expenses in any year is a profit, and the profit can only be ascertained after the increased liabilities, if any, have been ascertained and provided for. Neither do I wish to say that the mere increase of the reserve for unexpired risks, year by year, is sufficient by itself to maintain a fire office in a strong position. The gross surplus has to provide for two classes of reserves:

(1) that for unexpired risks, and (2) a permanent reserve for exceptional losses and to inspire confidence in the minds of the public. A really strong and well-managed company will always provide for any increase in its liabilities in bad years as well as in good, and will also whenever possible add substantial sums to its permanent reserves. If both these processes are carried on simultaneously we shall find a much larger increase in reserves than if the additions are made spasmodically and omitted when the surplus falls below a substantial figure.

Now let us consider how the reserve for unexpired risks is determined and how it may be roughly checked by those who desire to examine fire insurance accounts with intelligence. The bulk of the home business is renewed annually and it is usual to regard half the premiums at the end of a year as unearned. That is to say there is on an average half a year's risk unexpired. But it is not necessary for a company to hold half a year's premiums against the unexpired risk since if it allowed the current risks to run off or reinsured them with another office it would be free from the ordinary expenses of management and commission. The expenses and commission have already been debited in the year's accounts. We may, therefore, deduct from 50 per cent. of the premiums, expenses and commission at the rate, say, of 33 per cent. and that gives us 50 less 16·5 or 33·5 per cent. (say one-third). This is the proportion of premiums usually considered sufficient on home annual business as a reserve for

unexpired risks though some home offices reserve a larger amount. If we look into the matter more closely we shall see that such a calculation is very rough. The English December renewals amount, I believe, to about one-third of the whole year's business instead of one-quarter, and the rest of the business is divided fairly evenly over the other three quarter-days. It is hardly necessary to go into the Scotch quarter-days for which the distribution is different since we only want an approximate estimate of the amount of the unexpired risk. If we take the December renewals at one-third of the year's business we shall get something like this :—

	Percentage of Business.
Premiums due on 25th December	33·3
Premiums due on 29th September	22·2
Premiums due on 24th June	22·2
Premiums due on 25th March	22·2
<hr/>	
	<u>100·0</u>

That will give us on 31st December practically the whole of the December premiums as unearned, three-fourths of September premiums, one-half of June premiums and one-fourth of March premiums.

Unearned Premiums.

	Per Cent.
Due 25th December	33·3
Due 29th September	16·7
Due 24th June	11·1
Due 25th March	5·5
<hr/>	
	<u>66·6</u>

Deducting one-third of this amount for expenses and commission we get the reserve for unexpired risks on home annual business at 44.4 per cent. of the premiums. It would not be fair to take this proportion as the correct necessary reserve as the premiums include a good deal of short-period business for six months and less which would have run off to a greater extent than the annual business. The long-term home business is practically negligible as it is small in amount. A more elaborate estimate than the one I have given was prepared a year or two ago by Mr. D. Deuchar, general manager of the Caledonian Insurance Company, and after allowing for short-period risks he brought out the reserve for unexpired risks on home business at some 37 per cent. of the premium income. The 40 per cent. adopted by some strong offices with purely home business would therefore appear to be ample.

UNITED STATES BUSINESS.

But when we turn to the United States, where there is much long-term insurance running in some cases for as much as five years, we see that the ordinary reserve of 40 per cent. for unexpired risks is insufficient. It is also misleading in the case of American business to take any approximate proportion of premiums as unearned and apply it indiscriminately to all companies. Fortunately we have fairly sufficient data which enable us to know what the reserve for unexpired risks in the United States roughly

amounts to in the case of all the British companies which do business there. In their returns to the Insurance Department of the State of New York the companies are required to state the amount of their premiums under one, two, three, four and five year contracts and to reserve definite proportions of these premiums for unexpired risks. Thus on one-year contracts they would be required to reserve one-half, and on longer contracts *pro rata* from the date when they were taken out, reckoning all policies from the middle of the first year. For example, the reserve at the end of 1902 on a four-year policy taken out in 1900 would be three-eighths of the premium

$$= \frac{1\frac{1}{2} \text{ years unexpired}}{4 \text{ years}}. \quad \text{If it was a five-year policy}$$

the reserve for unexpired risks would be one-half, that is $\frac{2\frac{1}{2} \text{ years unexpired}}{5 \text{ years}}$. In reckoning the unexpired period the premiums are taken as having been paid on an average in the middle of each year. On the same system the reserve on a five-year policy taken out in 1902 must be at the end of the year

$$\text{nine-tenths of the premium} = \frac{4\frac{1}{2} \text{ years unexpired}}{5 \text{ years}}$$

Seeing that the reserve for unexpired risks required by the insurance laws of the New York State ranges from one-half up to nine-tenths or 90 per cent. of the premiums on five-year policies the total proportion which this reserve bears to the premium income must depend on the amount of long-term business held by individual companies. That is seen to be the case,

and in 1902, for which year I have the figures before me, the reserve for unexpired risks under the United States business of British companies in some cases approached 85 per cent. of the premiums and rarely fell below 70 per cent. It will also be seen that a company by diminishing its amount of long-term policies may actually have a growing premium income with a diminishing reserve for unexpired risks. In fact a reserve for unexpired risks which on the New York system shows a declining proportion to the premium income is a certain sign that the long-term risks are being run off.

My readers may have noticed that the reserve for unearned premiums required by the New York State is larger than the amount necessary to reinsure the outstanding risks, and when we are ascertaining what the liabilities of fire offices really are we ought to deduct from the nominal reserves for unexpired risks about 35 per cent. for commission and expenses. Let me take an example :—

COMPANY A.

United States Business, 1901.

Premiums	\$2,828,181
Claims paid and outstanding	\$1,955,256
Expenses and commission	997,352
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	\$2,952,608
Gross deficit	\$124,427
Legal reserve for unexpired risks at the end of 1901	2,288,311
Legal reserve for unexpired risks at the end of 1900	2,010,650

Actual reserve for liabilities under unexpired risks (above legal reserve less 35 per cent. for expenses) 1901	1,487,402
Actual reserve for liabilities under unexpired risks (above legal reserve less 35 per cent. for expenses) 1900	1,306,926
Increase in liabilities	\$180,476
Gross deficit	124,427
Increase in liabilities	180,476
Net loss on 1901	\$304,903

We have not been obliged to make assumptions as to the increase in liabilities following proportionately on the increase in premiums but have been able to calculate it directly from the legal reserve for unexpired risks given in the Green Book of the New York State Insurance Department.

I should now like to draw attention to another point, namely, the manner in which the very full figures published in New York enable us to keep a check upon the provision of reserve for unexpired risks on the whole of the British companies' business.

Take again Company A. The premiums for 1901 were in America \$2,828,181 or in sterling were £565,636. The United States reserve for unexpired risk, after deducting 35 per cent. for expenses and commission, was £297,480. The total premiums on the whole business of the company was £1,623,814 and the total reserve maintained for unexpired risks was £649,526. We get then the following sum:—

Total premiums	£1,623,814
U.S.A. premiums	565,836
<hr/>	
Premiums outside U.S.A.	£1,057,978
<hr/>	
Total reserve for unexpired risks (40 per cent. of the premium income)	£649,526
Reserve on U.S.A. business	297,480
<hr/>	
Reserve for unexpired risks outside U.S.A.	£352,046
<hr/>	

This brings out the reserve for unexpired risks on the rest of the business outside the United States at one-third of the premiums, which we have already indicated is rather less than is sufficient on annual fire insurance policies. This calculation would indicate that the 40 per cent. of the premiums adopted by Company A as its reserve for unexpired risks on the whole of its business is not quite sufficient and that 45 per cent. would be nearer the mark.

Now take the case of Company B which keeps no specific reserve for unexpired risks and analyse its figures for 1901. In that case we get:—

Total premiums	£2,509,721
Premiums in U.S.A.	812,487
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Premiums outside U.S.A.	£1,697,234
<hr/>	
Reserve for unexpired risks in U.S.A. (un- expired premiums less 35 per cent.)	£471,111
Reserve on business outside U.S.A. on basis of one-third of premiums	565,744
Total reserve for unexpired risks on whole business	£1,036,855
<hr/>	

40 per cent. of the premium income of £2,509,721 = £1,003,888, which is nearly the above calculated reserve and shows that the estimate of 40 per cent. of the premiums on companies with United States, as well as other business principally at annual premiums, closely corresponds with a reserve of one-third of the premiums on annual business. As, however, one-third of the premiums on home business is rather below the proper reserve on annual policies, which should be about 37 per cent., the corresponding 40 per cent. on the whole business, home and foreign, should be regarded as a minimum reserve if fire offices are to provide for their liabilities each year in a systematic manner. If a company has much United States business, as many now have, an advance to 45 per cent. of the premiums on the whole business would appear to measure more accurately the true condition of its liabilities for unexpired risks.

DECLINE IN RESERVES.

An examination of the published accounts of the British fire insurance companies for the past fifteen years shows that in very many cases a considerable decline in reserves has taken place. The actual amount has increased largely, but the proportion of resources to premium income—in other words to liabilities—has fallen off. This shows that the business of the insurance companies has increased much faster than financial provision for it. In some cases the decline has been very great and serious and has precipitated amalgamation with other companies.

In a few other cases the reserves have fallen to a point which suggests dangers in the future. The decline in reserves makes it of pressing importance that at the very least an adequate provision for unexpired liabilities should be set aside every year, for unless this is done the reserves may sink—and have sometimes sunk—to a point where they are insufficient to meet current liabilities and no provision is left for exceptional losses.

A further analysis shows that those companies which do so provide each year for unexpired risks, in bad years as in good ones, show a generally higher proportion of resources to premium income than companies which leave the unexpired risks to look after themselves. This may be illustrated from the following tables. In Table A is shown the permanent fire reserves (excluding capital and profit and loss balances) and proportion to premium income of six offices in 1888 and 1902 *which do not specifically provide for their liabilities for unexpired risks.*

TABLE A.

1888. Fire reserves.	Percentage of premiums.	1902. Fire reserves.	Percentage of premiums.
£		£	
641,006	185	2,126,165	228
708,679	90	1,555,314	89
490,400	143	700,000	128
2,050,000	197	2,710,394	98
87,033	53	732,940	43
380,000	65	850,000	70
£4,357,118	133	£8,674,813	109

There is a fall here in reserves of 24 per cent. of the premium income which represents a sum of £1,901,700. That is to say, if the proportion of reserves to premiums existing in 1888 had been maintained in 1902 the six companies would have set aside £10,576,513 instead of only £8,674,813. If 45 per cent. of the premium income be taken as the full provision for unexpired risks we see that the unpledged reserves for exceptional losses and for general security have fallen from 88 per cent. of the premiums in 1888 to 64 per cent. of the premiums in 1902. It is important to exclude the credit balances at profit and loss since these amounts may be drawn upon for dividends and my point is that permanent reserves should always be maintained before any sums are carried to profit and loss accounts.

Now take in Table B six companies of much the same class as those represented in Table A, but which *have throughout the period 1888-1902 provided each year for the increase in liabilities for unexpired risks.*

TABLE B.

1888. Fire Reserves.	Percentage of premiums.	1902. Fire Reserves.	Percentage of premiums.
£ 930,194	151	£ 1,484,146	154
519,942	79	878,754	82
623,900	128	591,416	133
1,890,000	147	2,100,000	107
1,677,418	132	2,296,416	123
1,598,896	221	1,853,465	153
£7,240,350	143	£9,204,197	122

Here while there has been a heavy fall in the proportion of reserves to premium income—21 per cent.—the standard of reserves both in 1902 and in 1888 is on the average much higher than shown in Table A. The drop of 21 per cent. represents £1,578,400. If the companies in Table A had maintained the standard of reserves in 1902 shown by those in Table B their resources would have been greater by £1,030,000.

The importance of very full reserves in the case of fire insurance companies will be generally admitted, and where they are not maintained at an adequate level disaster must inevitably come sooner or later. Their provision requires the most constant watchfulness on the part of directors and managers and self-denial on the part of shareholders. To pay dividends at the expense of reserves is the costliest kind of folly, and the history of fire insurance is full of the wrecks caused by the subordination of security to dividends. When the resources have become dangerously depleted it is then too late to cut off the dividends: this should have been done years before. I have already given an example of a company which drifted on to the rocks and had to be salved by amalgamation. The figures of a few more may now be instanced, and one may say that if some other companies allow their reserves to decline as they have done during recent years they also will reach a level when only strong measures can stave off either amalgamation or ruin.

COMPANY D.

	Annual premiums.	Premium re-serve for unexpired risks.	Percent-age.	Fire re-serve.	Percentage of reserves to premiums.	
	£			£		
1888	182,128	—	—	88,889	48 $\frac{1}{4}$	
1889	178,861	—	—	80,501	45	
1890	183,409	—	—	90,187	49 $\frac{1}{2}$	
1891	202,659	—	—	86,486	42 $\frac{3}{4}$	
1892	204,299	—	—	73,024	35 $\frac{1}{4}$	
1893	193,560	—	—	54,300	28	
1894	184,480	—	—	64,491	35	
1895	179,166	—	—	70,699	39 $\frac{1}{2}$	
1896	181,588	—	—	81,087	44 $\frac{3}{4}$	
1897	188,186	—	—	80,537	42 $\frac{3}{4}$	
1898	190,333	—	—	71,277	37 $\frac{1}{2}$	
1899	223,243	—	—	78,259	35	
1900	249,778	—	—	69,114	27 $\frac{2}{3}$	
1901	}					
1902		Taken over by another company, Jan., 1902.				

COMPANY E.

	Annual premiums.	Premium reserve for unexpired risks.	Percent-age.	Fire re-serve.	Percentage of reserves to premiums.	
	£			£		
1888	51,660	—	—	37,774	73.12	
1889	81,087	—	—	41,505	51.18	
1890	107,215	—	—	50,415	47.03	
1891	} 190,053	—	—	42,778	22.51	No premium reserve.
1892						
1893	179,983	—	—	25,194	14.00	
1894	185,307	—	—	50,194	27.09	
1895	175,638	—	—	50,194	28.58	
1896	141,751	—	—	52,000	36.68	
1897	146,637	—	—	52,000	35.46	
1898	150,319	—	—	54,000	35.92	
1899	104,799	—	—	52,000	49.62	
1900	96,707	—	—	52,000	53.77	
1901	83,269	—	—	24,839	29.83	
1902	90,164	—	—	30,730	34.00	

COMPANY F.

	Annual premiums.	Premium reserve for unexpired risks.	Percent-age.	Fire reserve.	Percentage of reserves to premiums.	
1888	192,634	—	—	92,000	47 $\frac{3}{4}$	No premium reserve.
1889	199,958	—	—	92,000	46 $\frac{1}{2}$	
1890	203,010	—	—	105,000	51 $\frac{3}{4}$	
1891	238,751	—	—	98,104	41 $\frac{1}{2}$	
1892	245,135	—	—	100,000	40 $\frac{3}{4}$	
1893	272,974	—	—	81,191	29 $\frac{3}{4}$	
1894	279,932	—	—	99,082	35 $\frac{3}{4}$	
1895	302,286	—	—	111,413	36 $\frac{1}{2}$	
1896	276,487	—	—	100,760	36 $\frac{3}{4}$	
1897	288,094	—	—	102,000	35 $\frac{1}{2}$	
1898	304,188	—	—	91,074	29 $\frac{7}{8}$	
1899	377,993	—	—	96,471	25 $\frac{1}{2}$	
1900	405,185	—	—	85,032	8 $\frac{3}{4}$	
1901	423,964	—	—	- 62,258	- 14 $\frac{2}{3}$	Deficit as the reserves were exhausted.
1902	409,507	—	—	- 58,078	- 14 $\frac{1}{3}$	

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